Technical Memorandum

NORTH SHORE COASTAL WATERSHEDS 2007
DWM WATER QUALITY MONITORING DATA

December 2012

Massachusetts Department of Environmental Protection
Division of Watershed Management
DWM Control Number CN 286.2

COMMONWEALTH OF MASSACHUSETTS
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Introduction

The purpose of this technical memorandum is to publish water quality data collected in the North Shore Coastal Watersheds as part of the Massachusetts Department of Environmental Protection (MassDEP), Division of Watershed Management (DWM) programmatic monitoring (MassDEP 2005a). The North Shore Coastal Watersheds water quality surveys were conducted between the months of May and September in 2007. Water quality samples were analyzed for nutrients and other conventional pollutants, bacteria (*Escherichia coli*), as well as dissolved oxygen and other field measurements. The aquatic macroinvertebrate and fish community data are published in separate technical memoranda.

Project Objectives

The 2007 surveys of the North Shore Coastal Watersheds focused on obtaining information to meet the following objectives (MassDEP 2007a):

- determine the water quality and biological health of rivers/streams within the watershed and increase coverage to rivers/streams that have never before been assessed by conducting assessments based on biological (aquatic macroinvertebrates, fish, bacteria) communities;
- provide biological and habitat data to document the status of benthic and fish communities over time (trend monitoring); provide biological, habitat, dissolved oxygen, temperature, chemical, and sediment quality/toxicity data to be used in making Aquatic Life and Aesthetics use assessments required by Section 305(b) of the Clean Water Act;
- provide data for other informational needs of Massachusetts regulatory agencies; and
- provide quality-assured *E. coli* data for the purpose of assessing Primary and Secondary Contact Recreational uses in rivers/streams.

Additional information regarding project objectives may be found in: *Sampling Analysis Plan Surface Water Monitoring North Coastal Watershed 2007* (MassDEP 2007b).

Sampling Plan

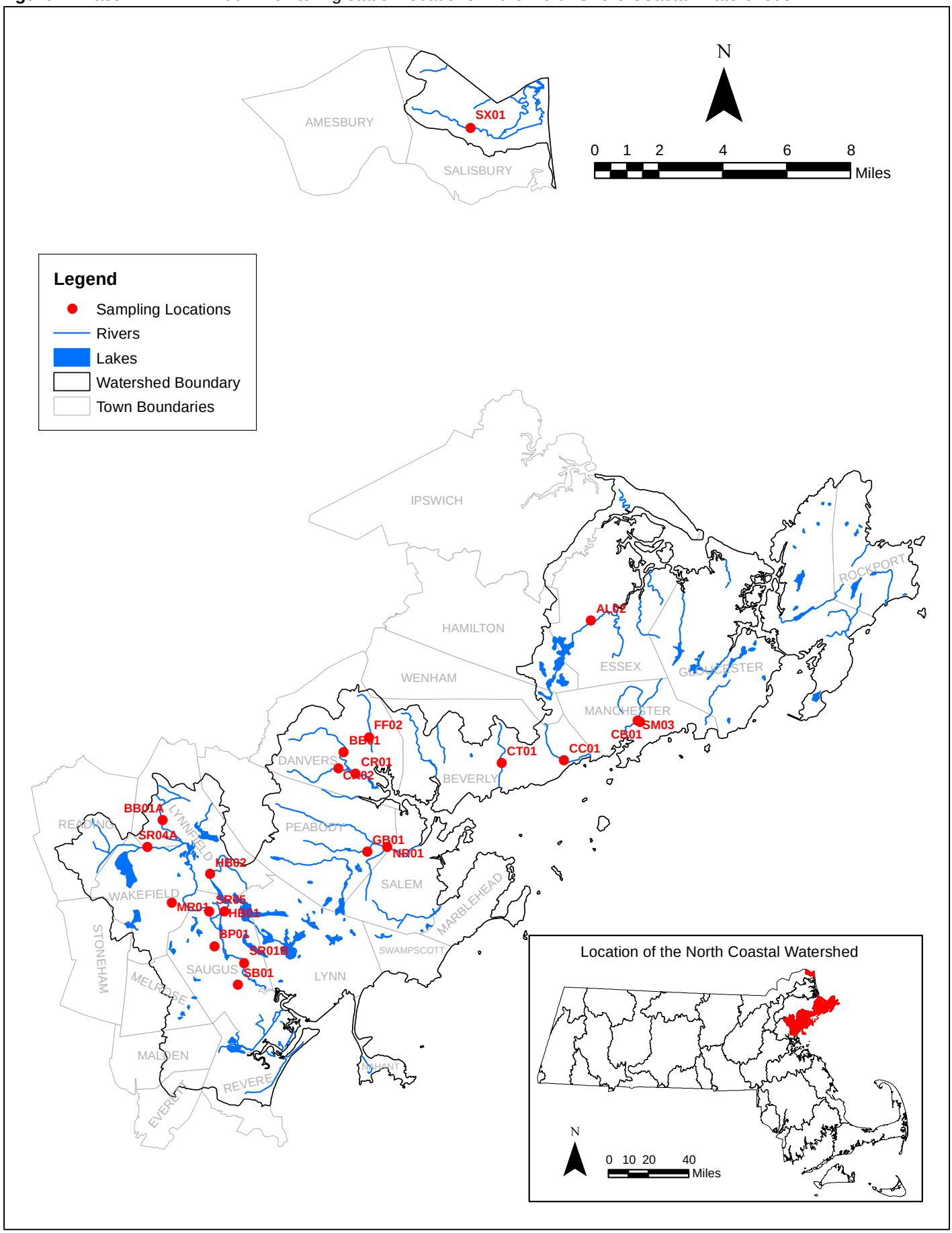
Water quality surveys were conducted a total of six times (weeks of April 30, June 5, July 10, August 14, August 30 [bacteria only] and September 18). Grab samples for total phosphorus, total nitrogen, ammonia-nitrogen, total suspended solids (TSS), color, turbidity, and *E. coli* were collected at a total of 21 stations. On the 1st, 3rd, and 5th surveys, grab samples for hardness analysis were collected at a total of five stations. The MassDEP's Wall Experiment Station (WES) conducted the analysis of all water quality samples for nutrients (total phosphorus, total nitrogen, and ammonia-nitrogen), TSS and *E. coli*. The color and turbidity samples were analyzed at the DWM lab in Worcester. Continuous temperature and dissolved oxygen monitoring with unattended metered probes was carried out at 20 sites. These unattended probes were deployed during the months of June, July, August, and September on Friday of the weeks preceding the water sampling surveys for that month and retrieved five days later. Finally, long-term temperature-only data loggers were deployed at six sites (MassDEP 2007a).

Table 1 and Figure 1 provide details and locations of the 2007 sampling sites. Additional information regarding the sampling design may be found in *Sampling Analysis Plan Surface Water Monitoring North Coastal Watershed 2007* (MassDEP 2007b).

Table 1. MassDEP DWM 2007 North Shore Coastal Watersheds sampling station descriptions and sampling parameters.

Station ID	Unique ID	Water Body	Site Description	Latitude	Longitude	*E. coli* Bacteria	Nutrients and Color	TSS\Turbidity	Hardness	Temperature Probe	Attended Multiprobe	Deployed Multiprobe
HB01	W0435	Hawkes Brook	[south of Hawkes Pond, Spring Street, Saugus]	42.49577	-71.01907	X	X	X			X	X
HB02	W0436	Hawkes Brook	[north of Hawkes Pond, Salem Street/Route 129, Lynnfield]	42.51245	-71.02730	X	X	X		X	X	X
MR01	W0437	Mill River	[Farm Street (south off of Route 129), Wakefield]	42.49964	-71.05097	X	X	X	X		X	X
BB01A	W0448	Beaverdam Brook	[downstream at Chestnut Street, Lynnfield]	42.53697	-71.05651	X	X	X	X	X	X	X
CR02	W0451	Crane Brook	[Pine Street, Danvers]	42.55986	-70.94856	X	X	X			X	X
CR01	W0452	Crane River	[Ash Street, Danvers]	42.55761	-70.93788	X	X	X			X	X
NR01	W0453	Proctor Brook	[Howley Street, Peabody]	42.52452	-70.91860	X	X	X			X	X
GB01	W0454	Goldthwait Brook	[Foster Street, Peabody]	42.52221	-70.93109	X	X	X	X	X	X	X
SB01	W0877	Shute Brook	[upstream of Central Street (upstream of railroad tracks), Saugus]	42.46230	-71.01048	X	X	X		X	X	X
BP01	W0878	Bennetts Pond Brook	[at mall entrance south off Lynn Fells Parkway and east of Forest Street, Saugus (approximately 0.3 miles from confluence with Saugus River)]	42.47966	-71.02508	X	X	X		X	X	X
SR04A	W0882	Saugus River	[Vernon Street/Main Street, Wakefield/Lynnfield]	42.52475	-71.06595	X	X	X	X		X	X
SR01B	W0883	Saugus River	[Elm Street, Saugus]	42.47228	-71.00682	X	X	X	X		X	X
CB01	W0888	Causeway Brook	[Lincoln Street, Manchester]	42.58004	-70.76362	X	X	X			X	X
SM03	W0889	Cat Brook	[Lincoln Street, Manchester]	42.58036	-70.76492	X	X	X		X	X	X
FF02	W1540	Frost Fish Brook	[Coolidge Road, Danvers]	42.57421	-70.92939	X	X	X			X	X
BB01	W1541	Beaver Brook	[Pickering Street, Danvers]	42.56745	-70.94475	X	X	X			X	X
CC01	W1542	Unnamed Tributary	[unnamed tributary to Chubb Creek, Oak Street, Beverly]	42.56290	-70.81030	X	X	X			X	X
CT01	W1543	Unnamed Tributary	[unnamed tributary to Beverly Cove locally known as "Curtis Brook", Tall Tree Drive, Beverly]	42.56182	-70.84839	X	X	X			X	X
SX01	W1544	Smallpox Brook	[Gerrish Road, Salisbury]	42.85004	-70.86466	X	X	X			X	X
SR05	W1545	Saugus River	[Cedar Glen Golf Course footbringe due west from club house, Saugus]	42.49547	-71.02759	X	X	X			X	
AL02	W1546	Alewife Brook	[downstream at Apple Street, Essex]	42.62587	-70.79312	X	X	X			X	X

Figure 1. MassDEP DWM 2007 monitoring station locations in the North Shore Coastal Watersheds.



Quality Assurance (QA) and Quality Control (QC)

Quality assurance and quality control procedures used in collecting samples and measurements were consistent with the prevailing DWM protocols that are described in CN 1.21 - Sample Collection Techniques for DWM Surface Water Quality Monitoring (MassDEP 2004), CN 4.21 - Water Quality Multiprobe Data Collection (MassDEP 2005b) and CN 4.41 - Multi-Probe Sonde Deployments for Continuous Unattended Water Quality Data Collection (MassDEP 2007c).

The DWM quality assurance and database management staff reviewed laboratory data reports and all multi-probe data. The data were validated and finalized per data validation procedures outlined in CN 56.15 - DWM Water Quality Data Validation Process (Summary) (MassDEP 2012a). All water quality sample data were validated by reviewing QC sample results, analytical holding time compliance, QC sample frequency and related ancillary data/documentation (at a minimum). A complete summary of the data review process for all 2007 DWM data is provided in CN 320.0 – Water Quality Data Validation Report for Year 2007 Project Data (MassDEP 2012b). Appendix 1 of this technical memorandum contains definitions for all data qualifiers.

Field and Analytical Methods

Procedures used for water quality sampling and sample handling are described in CN 1.21 - Sample Collection Techniques for DWM Surface Water Quality Monitoring (MassDEP 2004). The Wall Experiment Station (WES) supplied all sample bottles and field preservatives, which were prepared according to the WES Laboratory Quality Assurance Plan and Standard Operating Procedures (MassDEP 2001). Procedures used for multi-probe calibration and deployment are described in CN 4.21 - Water Quality Multiprobe Data Collection (MassDEP 2005b) and CN 4.41 - Multi-Probe Sonde Deployments for Continuous Unattended Water Quality Data Collection (MassDEP 2007c).

Concurrent with the collection of water quality samples, site characteristics and sampling conditions were recorded on DWM field sheets. Riparian vegetation, observed uses (e.g. swimming, boating, fishing), potential pollution sources, the presence/absence of objectionable deposits (trash, debris and scum), the extent of periphyton/algae/aquatic plant growth within the sampling reach, and sampling conditions were all noted at each station.

Survey Conditions

Precipitation and stream discharge data were analyzed to estimate hydrological conditions during the 2007 water quality surveys in the North Shore Coastal Watersheds. Precipitation data collected during the survey period in 2007 were downloaded from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC) for the Reading, MA (GHCND:USC00196783) and Beverly, MA Municipal Airport (GHCND:USW00054733) weather stations (NOAA 2012). The precipitation totals on the water quality survey dates and the five days prior to the survey dates were extracted from the records. In addition, the monthly precipitation totals for 2007 and the twenty year monthly averages for the two weather stations were downloaded to determine if precipitation amounts in 2007 were above or below normal (Table 2).

Table 2. Total monthly precipitation in 2007 at weather stations in the North Shore Coastal Watersheds. The twenty year monthly average precipitation totals for those stations are in parentheses (NOAA 2012).

Month	Reading, MA	Beverly, MA Municipal Airport
January	2.87 (3.91)	2.78 (3.36)
February	2.43 (3.73)	2.36 (3.28)
March	5.22 (5.11)	4.89 (4.56)
April	8.41 (4.47)	7.80 (4.37)
May	5.33 (4.20)	4.29 (3.80)
June	2.50 (3.98)	2.57 (3.64)
July	3.31 (4.26)	3.41 (3.86)
August	2.07 (3.52)	1.28 (3.38)
September	2.97 (3.86)	2.75 (3.95)
October	3.04 (4.58)	3.22 (4.38)
November	3.62 (4.62)	3.30 (4.24)
December	6.07 (4.53)	4.90 (3.36)

Stream discharge data from the real-time United States Geological Survey (USGS) stream gage station 01102345 Saugus River at Saugus Ironworks at Saugus, MA was downloaded from the USGS web site (USGS 2012a). The 7Q10 at the USGS gage station is 1.4 cubic feet per second (cfs) using USGS StreamStats (USGS 2012b). The entire period of record for the station was downloaded and the average daily discharge values on the water quality survey dates and the five days prior to the survey dates was extracted from this record. The percent of time that the average daily discharge on the extracted dates were equaled or exceeded during the entire period of record for the gage was calculated to put the discharge value into historical perspective. The precipitation and discharge data are summarized and presented in Table 3.

Table 3. The precipitation totals (inches) and daily average discharge (cubic feet per second) for five days prior to and each DWM 2007 North Shore Coastal Watersheds survey date (USGS 2012a) (NOAA 2012).

Note: The percent of time that the daily average discharge was equaled or exceeded over the entire period of record at each stream gage are also provided (percent exceeded). Shaded dates indicate the deployment of multiprobes and large bold dates indicate collection of water samples.

	Precipitation		Discharge (Percent Exceeded)
Date	Reading, MA	Beverly, MA Municipal Airport	01102345 Saugus River at Saugus Ironworks at Saugus, MA
04/26/07	0.00	0.00	74 (10.8)
04/27/07	0.86	0.73	92 (6.9)
04/28/07	0.02	0.16	89 (7.5)
04/29/07	0.03	0.14	77 (10.1)
04/30/07	0.10	0.07	73 (11.2)
05/01/07	0.00	0.00	73 (11.2)
05/27/07	0.00	0.00	41 (27.6)
05/28/07	0.03	0.00	38 (29.9)

Table 3. The precipitation totals (inches) and daily average discharge (cubic feet per second) for five days prior to and each DWM 2007 North Shore Coastal Watersheds survey date (USGS 2012a) (NOAA 2012).

Note: The percent of time that the daily average discharge was equaled or exceeded over the entire period of record at each stream gage are also provided (percent exceeded). Shaded dates indicate the deployment of multiprobes and large bold dates indicate collection of water samples.

	Precipitation		Discharge (Percent Exceeded)
Date	**Reading, MA**	**Beverly, MA Municipal Airport**	**01102345 Saugus River at Saugus Ironworks at Saugus, MA**
05/29/07	0.00	0.00	36 (32.0)
05/30/07	0.00	0.00	34 (34.1)
05/31/07	0.00	0.00	32 (36.0)
06/01/07	0.00	0.00	27 (42.3)
06/02/07	0.03	0.00	23 (46.9)
06/03/07	0.05	0.04	22 (48.3)
06/04/07	2.04	2.07	69 (12.4)
06/05/07	0.00	0.00	99 (6.0)
06/06/07	0.00	0.00	64 (13.9)
07/01/07	0.22	0.16	7.5 (76.9)
07/02/07	0.00	0.00	4.7 (85.2)
07/03/07	0.00	0.00	4.0 (87.7)
07/04/07	0.14	0.16	3.6 (89.1)
07/05/07	0.83	0.82	12 (66.6)
07/06/07	0.23	0.02	9.9 (70.8)
07/07/07	0.00	0.00	6.1 (80.4)
07/08/07	0.07	0.16	5.1 (83.6)
07/09/07	0.12	0.39	8.8 (73.3)
07/10/07	0.00	0.00	7.9 (75.4)
07/11/07	0.00	0.03	5.5 (82.3)
08/05/07	0.00	0.00	2.8 (92.0)
08/06/07	0.38	0.37	4.1 (87.4)
08/07/07	0.01	0.00	5.2 (83.3)
08/08/07	0.26	0.81	7.6 (76.5)
08/09/07	0.00	0.00	9.1 (72.6)
08/10/07	0.04	0.08	5.0 (84.0)
08/11/07	0.00	0.00	3.9 (88.1)
08/12/07	0.00	0.00	3.3 (90.1)
08/13/07	0.50	0.71	5.6 (81.9)
08/14/07	0.00	0.00	11 (69.3)
08/15/07	0.00	0.00	5.0 (84.0)
08/25/07	0.00	0.00	1.9 (95.6)
08/26/07	0.00	0.00	1.8 (96.1)
08/27/07	0.00	0.00	1.7 (96.6)

Table 3. The precipitation totals (inches) and daily average discharge (cubic feet per second) for five days prior to and each DWM 2007 North Shore Coastal Watersheds survey date (USGS 2012a) (NOAA 2012).

Note: The percent of time that the daily average discharge was equaled or exceeded over the entire period of record at each stream gage are also provided (percent exceeded). Shaded dates indicate the deployment of multiprobes and large bold dates indicate collection of water samples.

	Precipitation		**Discharge (Percent Exceeded)**
Date	**Reading, MA**	**Beverly, MA Municipal Airport**	**01102345 Saugus River at Saugus Ironworks at Saugus, MA**
08/28/07	0.00	0.00	1.6 (97.0)
08/29/07	0.00	0.00	1.6 (97.0)
08/30/07	0.00	0.00	1.5 (97.3)
09/12/07	0.00	0.00	15 (60.3)
09/13/07	0.00	0.00	4.9 (84.4)
09/14/07	0.01	0.00	2.9 (91.6)
09/15/07	0.38	0.36	4.6 (85.5)
09/16/07	0.00	0.00	3.8 (88.4)
09/17/07	0.00	0.00	2.7 (92.2)
09/18/07	0.00	0.00	2.3 (93.8)
09/19/07	0.01	0.00	2.4 (93.3)

Station Observations

Station observations were recorded on field sheets for each survey by a DWM investigator. Station observations are described below in Table 4 for each sampling event (MassDEP 2007d).

Water Quality Data

All MassDEP DWM water quality data are managed and maintained in the Water Quality Data Access Database (WQD). Tables 5 – 9 below provide the 2007 North Shore Coastal Watersheds water quality data. The procedures used to accept, accept with qualification, or censor data are based on the DWM Standard Operating Procedures (SOP) for data validation and usability (MassDEP 2012a), and are in addition to separate quality assurance activities and laboratory validation steps undertaken by WES. Definitions for the data qualifiers are provided in Appendix 1.

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
AL02	W1546	05/01/07	Flowing	None	Clear	Brownish	S	S	N	N	S	No		No	
AL02	W1546	06/05/07	Flowing	None	Slightly Turbid	Dark Tan	M	U	U	U	U	No		No	
AL02	W1546	07/10/07	Flowing	None	Clear	Clear	D	N	N	N	N	No		Yes	trash - minimal one beer bottle, one metal shard
AL02	W1546	08/14/07	Flowing	None	Slightly Turbid	Clear	VD	N	N	N	N	No		No	
AL02	W1546	08/30/07	Stagnant	None	Clear	Clear	N	N	S	N	M	No		Yes	trash - toilet flushing apparatus, clothes
AL02	W1546	09/18/07	Flowing	None	Clear	Clear	S	N	D	N	N	Yes	oily sheens	Yes	orange floc - in pool
AL02	W1546	06/01/07	Flowing	None	Clear	Light Yellow	Not Applicable - Probe Deploy Field Sheet								
AL02	W1546	07/06/07	Flowing	None	Clear	Clear									
AL02	W1546	08/10/07	Flowing	None	Clear	Clear									
AL02	W1546	09/17/07	Flowing	None	Clear	Clear									
BB01	W1541	05/01/07	Flowing	None	Clear	Light Yellow	N	S	M	N	N	No		No	
BB01	W1541	06/05/07	Flowing	None	Highly Turbid	Brownish	N	N	N	N	N	No		No	
BB01	W1541	07/10/07	Flowing	None	Clear	Clear	S	N	N	N	N	Yes	oily sheens; small oily sheen appears natural	No	
BB01	W1541	08/14/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
BB01	W1541	08/30/07	Stagnant	None	Clear	Clear	N	N	N	N	N	No		No	

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
BB01	W1541	09/18/07	Flowing	None	Slightly Turbid	Greyish	N	N	N	N	N	Yes	oily sheens; natural for almost stagnant water	Yes	trash
BB01	W1541	06/01/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
BB01	W1541	07/06/07	Flowing	None	Slightly Turbid	Clear									
BB01	W1541	08/10/07	Flowing	Sulfide	Clear	Clear									
BB01	W1541	09/17/07	Stagnant	None	Clear	Clear									
BB01A	W0448	05/01/07	Flowing	None	Slightly Turbid	Reddish	N	N	N	N	N	No		No	
BB01A	W0448	06/05/07	Flowing	None	U	Brownish	N	U	U	U	U	No		No	
BB01A	W0448	07/10/07	Flowing	None	Clear	Light Yellow	N	N	S	N	N	No		Yes	trash
BB01A	W0448	08/14/07	Flowing	Musty	Clear	Light Yellow	N	N	N	N	N	No		Yes	trash
BB01A	W0448	08/30/07	Flowing	Musty	Clear	Clear	N	N	N	N	N	No		Yes	trash - beer can
BB01A	W0448	09/18/07	Flowing	None	Slightly Turbid	Brownish	N	N	N	N	N	No		No	
BB01A	W0448	06/01/07	Flowing	Musty	Slightly Turbid	Brownish	Not Applicable - Probe Deploy Field Sheet								
BB01A	W0448	06/29/07	Flowing	None	Slightly Turbid	Brownish									
BB01A	W0448	07/06/07	Flowing	Musty	Moderately Turbid	Reddish									
BB01A	W0448	08/10/07	Flowing	Musty	Moderately Turbid	Brownish									
BB01A	W0448	09/17/07	Flowing	None	Slightly Turbid	Brownish									

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
BP01	W0878	05/01/07	Flowing	None	Clear	Clear	S	S	N	N	N	No		No	
BP01	W0878	06/01/07	Flowing	None	Clear	Clear	S	N	N	N	S	No		No	
BP01	W0878	06/05/07	Flowing	None	Clear	Clear	N	S	N	N	S	No		No	
BP01	W0878	06/06/07	NR	None	Clear	Light Yellow	NR	N	N	N	N	NR		NR	
BP01	W0878	07/10/07	Flowing	None	Clear	Clear	S	N	N	N	N	Yes	foam; sparse	Yes	trash
BP01	W0878	08/14/07	Flowing	None	Clear	Clear	N	N	S	N	M	No		Yes	trash
BP01	W0878	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		Yes	trash - very minimal
BP01	W0878	09/18/07	Flowing	None	Clear	Clear	S	N	S	N	M	No		No	
BP01	W0878	06/29/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
BP01	W0878	07/06/07	Flowing	None	Clear	Clear									
BP01	W0878	08/10/07	Flowing	None	Clear	Clear									
BP01	W0878	09/17/07	Flowing	None	Clear	Clear									
CB01	W0888	05/01/07	Flowing	None	Clear	Brownish	D	M	N	N	N	No		No	
CB01	W0888	06/05/07	Flowing	None	Slightly Turbid	Brownish	U	U	U	U	U	No		No	
CB01	W0888	07/06/07	Flowing	None	Moderately Turbid	Brownish	S	N	N	N	N	Yes	pollen/dust blankets; pollen/coarse organic matter	No	
CB01	W0888	07/10/07	Flowing	Musty	Slightly Turbid	Brownish	M	N	N	N	N	No		No	

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
CB01	W0888	07/11/07	Stagnant	None	Moderately Turbid	Brownish	S	U	U	U	U	Yes	oily sheens; oily sheen visible on surface	No	
CB01	W0888	08/10/07	Stagnant	Sulfide	Slightly Turbid	Clear	M	N	N	N	N	Yes	pollen/dust blankets; organic matter	No	
CB01	W0888	08/14/07	Flowing	None	Slightly Turbid	Brownish	VD	N	N	N	N	No		No	
CB01	W0888	08/15/07	Stagnant	None	Clear	Clear	M	N	N	N	N	Yes	pollen/dust blankets	No	
CB01	W0888	09/17/07	Stagnant	None	Slightly Turbid	Clear	S	N	N	N	S	No		No	
CB01	W0888	09/18/07	Stagnant	Musty	Clear	Light Yellow	M	N	N	N	N	Yes		Yes	trash
CB01	W0888	09/19/07	Stagnant	Musty	Clear	Greyish	S	U	U	U	U	No		Yes	trash
CB01	W0888	06/01/07	Stagnant	None	Clear	Light Yellow	Not Applicable - Probe Deploy Field Sheet								
CC01	W1542	05/01/07	Flowing	None	Clear	Brownish	N	M	M	N	N	No		No	
CC01	W1542	06/05/07	Flowing	Raw sewage	Slightly Turbid	Dark Tan	N	N	N	N	N	No		No	
CC01	W1542	07/10/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		No	
CC01	W1542	08/14/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		No	
CC01	W1542	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		No	
CC01	W1542	09/18/07	Flowing	None	Clear	Clear	N	N	M	N	N	No		Yes	trash - minor
CC01	W1542	06/01/07	Flowing	None	Clear	Light Yellow	Not Applicable - Probe Deploy Field Sheet								
CC01	W1542	07/06/07	Flowing	None	Clear	Clear									

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
CC01	W1542	08/10/07	Flowing	None	Clear	Clear									
CC01	W1542	09/17/07	Flowing	None	Clear	Clear									
CR01	W0452	05/01/07	Flowing	None	Clear	Clear	N	M	D	N	N	No		No	
CR01	W0452	06/01/07	Flowing	None	Slightly Turbid	Clear	S	S	S	N	N	No		Yes	trash; trash on banking
CR01	W0452	06/05/07	Flowing	None	Moderately Turbid	Brownish	N	U	U	U	U	No		No	
CR01	W0452	06/06/07	Flowing	None	Slightly Turbid	Brownish	N	N	S	N	N	No		No	
CR01	W0452	07/10/07	Flowing	None	Clear	Clear	N	N	N	D	N	Yes	foam - appears natural	No	
CR01	W0452	08/14/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
CR01	W0452	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		Yes	trash - minimal trash, old radio instream near bridge
CR01	W0452	09/18/07	Flowing	None	Clear	Light Yellow	N	N	N	N	N	No		Yes	trash - other - tire
CR01	W0452	07/06/07	Flowing	None	Slightly Turbid	Brownish									
CR01	W0452	08/10/07	Flowing	Petroleum	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
CR01	W0452	09/17/07	Flowing	None	Clear	Clear									
CR02	W0451	05/01/07	Flowing	None	Clear	Clear	N	S	VD	N	N	No		Yes	Trash; small amount hung up on submerged branches
CR02	W0451	06/01/07	Flowing	None	Slightly Turbid	Clear	S	S	N	N	N	No		Yes	trash; general trash, metal and cinder blocks

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
CR02	W0451	06/05/07	Flowing	None	Moderately Turbid	Brownish	N	N	S	N	N	No		No	
CR02	W0451	06/06/07	Flowing	None	Slightly Turbid	Brownish	N	N	S	N	N	No		No	
CR02	W0451	07/10/07	Flowing	None	Clear	Other	N	N	N	N	N	No		Yes	trash; pipes, cinder blocks, bricks, assorted metal debris
CR02	W0451	08/14/07	Flowing	None	Slightly Turbid	Light Yellow	N	N	N	N	N	No		No	
CR02	W0451	08/30/07	Flowing	None	Clear	Clear	N	N	VD	N	N	No		Yes	trash - minimal trash (bricks, bottles, etc)
CR02	W0451	09/18/07	Flowing	None	Clear	Greyish	N	N	VD	N	N	No		Yes	trash
CR02	W0451	07/06/07	Flowing	None	Moderately Turbid	Clear	Not Applicable - Probe Deploy Field Sheet								
CR02	W0451	08/10/07	Flowing	None	Slightly Turbid	Clear									
CR02	W0451	09/17/07	Flowing	Musty	Clear	Clear									
CT01	W1543	05/01/07	Flowing	None	Clear	Brownish	N	S	N	N	S	No		No	
CT01	W1543	06/05/07	Flowing	None	Moderately Turbid	Brownish	N	N	N	N	N	No		No	
CT01	W1543	07/10/07	Flowing	None	Clear	Reddish	N	N	N	N	S	Yes	foam; some foam along edge and collecting on debris dams, looks natural	Yes	trash - a couple of beer cans etc, minimal
CT01	W1543	08/14/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		No	
CT01	W1543	08/30/07	No Water	None	Clear	Clear	N	N	N	N	N	No		No	
CT01	W1543	09/17/07	Flowing	None	Clear	Clear	S	N	S	N	N	No		Yes	trash; minimal

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
CT01	W1543	09/18/07	Flowing	None	Clear	Clear	S	N	M	N	N	No		Yes	orange floc
CT01	W1543	09/19/07	Flowing	None	Clear	Clear	S	N	M	N	M	No		Yes	trash
CT01	W1543	06/01/07	Flowing	None	Clear	Light Yellow	Not Applicable - Probe Deploy Field Sheet								
CT01	W1543	07/06/07	Flowing	None	Highly Turbid	Brownish									
CT01	W1543	08/10/07	No Water	NR	NR	NR									
FF02	W1540	05/01/07	Flowing	None	Clear	Clear	S	N	D	N	N	No		No	
FF02	W1540	06/05/07	Flowing	None	Clear	Dark Tan	N	N	N	N	N	No		No	
FF02	W1540	07/10/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		No	
FF02	W1540	08/14/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
FF02	W1540	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		Yes	trash - minimal trash
FF02	W1540	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		Yes	trash - only a little (bricks, wood)
FF02	W1540	06/01/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
FF02	W1540	07/06/07	Flowing	None	Clear	Clear									
FF02	W1540	08/10/07	Flowing	None	Clear	Clear									
FF02	W1540	09/17/07	Flowing	None	Clear	Clear									
GB01	W0454	05/01/07	Flowing	None	Clear	Light Yellow	S	S	N	N	N	No		No	

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
GB01	W0454	06/05/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
GB01	W0454	07/10/07	Flowing	None	Clear	Clear	N	N	N	N	M	No		Yes	trash
GB01	W0454	08/14/07	Flowing	Musty	Clear	Clear	N	N	M	N	M	No		Yes	trash
GB01	W0454	08/30/07	Flowing	None	Clear	Clear	N	S	M	D	N	Yes	oily sheens, foam; minimal	Yes	trash; very minimal, other; detritus - "significant" - loose floc?
GB01	W0454	09/18/07	Flowing	None	Clear	Clear	N	N	M	N	N	No		Yes	trash - glass, old ceramic pipe, concrete, industrial
GB01	W0454	06/01/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
GB01	W0454	06/29/07	Flowing	Musty	Clear	Clear									
GB01	W0454	07/06/07	Flowing	None	Clear	Clear									
GB01	W0454	08/10/07	Flowing	None	Clear	Clear									
GB01	W0454	09/17/07	Flowing	None	Clear	Clear									
HB01	W0435	05/01/07	Flowing	None	Clear	Clear	N	N	M	N	N	Yes	oily sheens; small spots of oily sheen	Yes	Trash - shopping cart
HB01	W0435	06/05/07	Flowing	Musty	Clear	Clear	N	N	N	N	N	No		Yes	Trash
HB01	W0435	07/10/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		Yes	Trash - lots
HB01	W0435	08/14/07	Stagnant	Musty	Slightly Turbid	Clear	N	N	N	N	N	No		Yes	trash - large amount by road
HB01	W0435	08/30/07	Flowing	Musty	Slightly Turbid	Clear	N	N	N	S	N	No		Yes	trash - moderate amounts of trash

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
HB01	W0435	09/17/07	Flowing	None	Slightly Turbid	Clear	N	U	U	U	U	No		Yes	trash - lots of trash
HB01	W0435	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	N	Yes	pollen/dust blankets; natural	Yes	trash - shopping cart, gas tank
HB01	W0435	09/19/07	Flowing	None	Clear	Clear	N	N	N	VD	N	No		Yes	trash; trash in stream and on land, this site is suboptimal
HB01	W0435	06/01/07	Stagnant	None	Slightly Turbid	Light Yellow	Not Applicable - Probe Deploy Field Sheet								
HB01	W0435	07/06/07	Stagnant	Sulfide	Slightly Turbid	Clear									
HB01	W0435	08/10/07	Flowing	None	Slightly Turbid	Other									
HB02	W0436	05/01/07	Flowing	None	Clear	Clear	N	S	M	N	N	No		No	
HB02	W0436	06/05/07	Flowing	None	Clear	Light Yellow	N	M	N	N	M	No		No	
HB02	W0436	07/10/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		No	
HB02	W0436	08/14/07	Flowing	None	Clear	Clear	N	N	N	N	M	No		No	
HB02	W0436	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		No	
HB02	W0436	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		No	
HB02	W0436	06/01/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
HB02	W0436	06/29/07	Flowing	None	Slightly Turbid	Brownish									
HB02	W0436	07/06/07	Flowing	None	Clear	Clear									
HB02	W0436	08/10/07	Flowing	None	Clear	Clear									

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
HB02	W0436	09/17/07	Flowing	None	Clear	Clear									
MR01	W0437	05/01/07	Flowing	None	Slightly Turbid	Brownish	N	N	N	N	N	No		No	
MR01	W0437	06/05/07	Flowing	None	Slightly Turbid	Light Yellow	N	U	U	U	U	No		No	
MR01	W0437	07/10/07	Flowing	Musty	Slightly Turbid	Light Yellow	N	N	N	N	N	No		Yes	trash
MR01	W0437	08/14/07	Flowing	Musty	Slightly Turbid	Light Yellow	N	N	N	N	S	No		Yes	trash
MR01	W0437	08/30/07	Flowing	None	Moderately Turbid	Clear	N	N	N	N	N	No		Yes	trash - minimal
MR01	W0437	09/17/07	Flowing	None	Clear	Brownish	N	N	N	N	N	Yes	oily sheens	No	
MR01	W0437	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	N	Yes	pollen/dust blankets	Yes	trash; bike, minimal
MR01	W0437	09/19/07	Flowing	Sulfide	Clear	Clear	N	N	N	N	N	Yes	oily sheens; foam - wetland sheens and foam	Yes	trash; bike in mud otherwise no trash seen
MR01	W0437	06/01/07	Flowing	None	Highly Turbid	Brownish	Not Applicable - Probe Deploy Field Sheet								
MR01	W0437	07/06/07	Flowing	None	Slightly Turbid	Clear									
MR01	W0437	08/10/07	Flowing	Musty	Clear	Clear									
NR01	W0453	05/01/07	Flowing	None	Clear	Light Yellow	N	S	N	N	N	No		Yes	trash; glass, plastic sheet, leather, paper, ceramic
NR01	W0453	06/05/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
NR01	W0453	07/10/07	Flowing	None	Clear	Clear	S	N	S	N	N	No		Yes	trash - minimal
NR01	W0453	08/14/07	Flowing	None	Clear	Clear	S	N	S	N	N	No		Yes	trash

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
NR01	W0453	08/30/07	Flowing	None	Clear	Clear	S	N	S	N	N	No		Yes	trash - very minimal
NR01	W0453	09/18/07	Flowing	None	Clear	Clear	S	N	N	N	N	No		Yes	trash - old bottles
NR01	W0453	06/01/07	Flowing	None	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
NR01	W0453	07/06/07	Flowing	Salty	Clear	Clear									
NR01	W0453	08/10/07	Flowing	None	Clear	Clear									
NR01	W0453	09/17/07	Flowing	None	Clear	Clear									
SB01	W0877	05/01/07	Flowing	None	Clear	Clear	N	S	VD	N	N	No		No	
SB01	W0877	06/01/07	Flowing	Musty	Slightly Turbid	Clear	N	N	N	N	N	No		No	
SB01	W0877	06/05/07	Flowing	Musty	Slightly Turbid	Light Yellow	N	N	N	N	N	No		No	
SB01	W0877	06/06/07	NR	None	Clear	Light Yellow	NR	N	N	N	N	NR		NR	
SB01	W0877	07/10/07	Flowing	None	Clear	Clear	N	N	N	N	S	No		Yes	trash
SB01	W0877	08/14/07	Flowing	None	Clear	Clear	N	N	N	S	N	No		Yes	trash
SB01	W0877	08/30/07	Flowing	None	Clear	Clear	N	N	S	N	M	No		Yes	trash - newspaper / bottles
SB01	W0877	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	D	No		No	
SB01	W0877	06/29/07	Flowing	None	Clear	Brownish	Not Applicable - Probe Deploy Field Sheet								
SB01	W0877	07/06/07	Flowing	None	Clear	Clear									

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
SB01	W0877	08/10/07	Flowing	None	Clear	Clear									
SB01	W0877	09/17/07	Flowing	None	Clear	Clear									
SM03	W0889	05/01/07	Flowing	None	Clear	Brownish	N	N	N	N	S	No		No	
SM03	W0889	06/05/07	Flowing	None	Slightly Turbid	Reddish	U	U	U	U	U	No		No	
SM03	W0889	07/10/07	Flowing	None	Clear	Clear	S	N	N	N	N	No		No	
SM03	W0889	08/14/07	Flowing	None	Clear	Light Yellow	S	N	N	N	N	No		No	
SM03	W0889	08/30/07	Stagnant	None	Clear	Clear	S	N	D	N	N	No		No	
SM03	W0889	09/18/07	Flowing	None	Clear	Light Yellow	S	N	N	N	N	No		Yes	trash
SM03	W0889	06/01/07	Flowing	Musty	Clear	Light Yellow									
SM03	W0889	06/29/07	Flowing	None	Clear	Clear									
SM03	W0889	07/06/07	Flowing	None	Slightly Turbid	Clear	Not Applicable - Probe Deploy Field Sheet								
SM03	W0889	08/10/07	Flowing	None	Slightly Turbid	Clear									
SM03	W0889	09/17/07	Flowing	Musty	Slightly Turbid	Greyish									
SR01B	W0883	05/01/07	Flowing	None	Clear	Light Yellow	N	S	N	N	N	No		Yes	trash; some trash on banks
SR01B	W0883	06/05/07	Flowing	None	Slightly Turbid	Brownish	N	U	U	U	U	No		No	
SR01B	W0883	07/10/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	Yes	foam - patchy	Yes	trash

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
SR01B	W0883	08/14/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		Yes	trash
SR01B	W0883	08/30/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		Yes	trash - road sign
SR01B	W0883	09/18/07	Flowing	None	Clear	Clear	N	N	N	N	N	No		Yes	trash - minimal
SR01B	W0883	06/01/07	Flowing	None	Slightly Turbid	Reddish	Not Applicable - Probe Deploy Field Sheet								
SR01B	W0883	07/06/07	Flowing	None	Clear	Reddish									
SR01B	W0883	08/10/07	Flowing	None	Clear	Light Yellow									
SR01B	W0883	09/17/07	Flowing	None	Clear	Clear									
SR04A	W0882	05/01/07	Flowing	None	Moderately Turbid	Brownish	N	S	N	N	N	No		No	
SR04A	W0882	06/05/07	Flowing	None	U	Brownish	N	U	U	U	U	Yes	oily sheens; small oil sheens	No	
SR04A	W0882	07/10/07	Flowing	None	Slightly Turbid	Dark Tan	U	U	U	U	U	No		No	
SR04A	W0882	08/14/07	Flowing	None	Highly Turbid	Light Yellow	U	U	U	U	U	Yes	pollen/dust blankets	Yes	trash
SR04A	W0882	08/30/07	Flowing	None	Highly Turbid	Light Yellow	N	U	U	U	U	No		No	
SR04A	W0882	09/18/07	Stagnant	None	Moderately Turbid	Brownish	N	U	U	U	U	Yes	pollen/dust blankets, other; organic matter	No	
SR04A	W0882	06/01/07	Flowing	None	Highly Turbid	Brownish	Not Applicable - Probe Deploy Field Sheet								
SR04A	W0882	07/06/07	Flowing	NR	Highly Turbid	Brownish									
SR04A	W0882	08/10/07	Flowing	None	Highly Turbid	Brownish									

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Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
SR04A	W0882	09/17/07	Flowing	None	Moderately Turbid	Brownish									
SR05	W1545	05/01/07	Flowing	None	Slightly Turbid	Clear	N	N	N	N	N	No		No	
SR05	W1545	06/01/07	Flowing	None	Moderately Turbid	Brownish	S	U	U	U	U	No		No	
SR05	W1545	06/05/07	Flowing	None	U	Light Yellow	N	U	U	U	U	No		No	
SR05	W1545	06/06/07	Flowing	None	Clear	Light Yellow	NR	N	N	N	N	NR		NR	
SR05	W1545	07/06/07	Flowing	None	Clear	Clear	S	N	N	N	S	NR		No	
SR05	W1545	07/10/07	Flowing	None	Clear	Light Yellow	S	N	N	N	M	No		No	
SR05	W1545	07/11/07	Flowing	NR	Clear	Light Yellow	S	N	N	N	S	No		Yes	trash
SR05	W1545	08/10/07	Flowing	NR	Clear	Clear	N	N	N	N	S	No		No	
SR05	W1545	08/14/07	Flowing	Musty	Clear	Clear	S	N	N	N	S	No		No	
SR05	W1545	08/15/07	Flowing	Other	Slightly Turbid	Light Yellow	S	N	S	N	N	No		Yes	other - golf balls
SR05	W1545	08/30/07	NR	Musty	Clear	Clear	S	N	N	N	S	No		No	
SR05	W1545	09/17/07	Flowing	None	Clear	Clear	S	U	U	U	U	No		No	
SR05	W1545	09/18/07	Flowing	None	Clear	Clear	S	N	N	N	N	No		Yes	
SR05	W1545	09/19/07	Flowing	None	Clear	Clear	S	N	N	N	N	No		No	
SX01	W1544	05/01/07	Flowing	None	Slightly Turbid	Brownish	S	N	N	M	N	No		No	

Table 4. 2007 Field observations from MassDEP DWM North Shore Coastal Watersheds surveys.
S=sparse (0-25%), M=moderate (25-50%), D=dense (50-75%), VD=very dense (75-100%), N=none, U=unobservable, NR=not recorded) (MassDEP 2007d)

Site ID	Unique ID	Date	Flow Status	Odor	Water Clarity	Color	Areal Density						Floating Scum Comments	Objectionable Deposits	Objectionable Deposit Comments
							Aquatic Plants	Filamentous Algae	Film Algae	Loose Floc	Moss	Floating Scum			
SX01	W1544	06/05/07	Flowing	None	Highly Turbid	Brownish	U	U	U	U	U	No		No	
SX01	W1544	07/10/07	Flowing	None	Slightly Turbid	Clear	VD	N	N	N	N	No		No	
SX01	W1544	08/14/07	Flowing	None	Moderately Turbid	Light Yellow	VD	N	N	N	N	No		No	
SX01	W1544	08/30/07	Flowing	None	Clear	Clear	VD	N	N	N	N	No		No	
SX01	W1544	09/18/07	Flowing	None	Slightly Turbid	Greyish	VD	U	U	U	U	No		Yes	trash - light
SX01	W1544	06/01/07	Flowing	Musty	Clear	Clear	Not Applicable - Probe Deploy Field Sheet								
SX01	W1544	07/06/07	Flowing	None	Moderately Turbid	Clear									
SX01	W1544	08/10/07	Flowing	None	Slightly Turbid	Clear									
SX01	W1544	09/17/07	Stagnant	None	Clear	Clear									

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
AL02	W1546	93-0623	05/01/07	10:46	*E. coli*	CFU/100mL	<5	j
AL02	W1546	93-0727	06/05/07	11:32	*E. coli*	CFU/100mL	290	
AL02	W1546	93-0833	07/10/07	12:01	*E. coli*	CFU/100mL	490	
AL02	W1546	93-0919	08/14/07	10:45	*E. coli*	CFU/100mL	130	
AL02	W1546	93-0944	08/30/07	10:45	*E. coli*	CFU/100mL	590	
AL02	W1546	93-1027	09/18/07	12:20	*E. coli*	CFU/100mL	71	
AL02	W1546	93-0623	05/01/07	10:46	Ammonia-N	mg/L	<0.02	
AL02	W1546	93-0727	06/05/07	11:32	Ammonia-N	mg/L	0.04	
AL02	W1546	93-0833	07/10/07	12:01	Ammonia-N	mg/L	0.03	
AL02	W1546	93-0919	08/14/07	10:45	Ammonia-N	mg/L	0.02	d
AL02	W1546	93-1027	09/18/07	12:20	Ammonia-N	mg/L	0.05	
AL02	W1546	93-0623	05/01/07	10:46	Total Nitrogen	mg/L	0.40	
AL02	W1546	93-0727	06/05/07	11:32	Total Nitrogen	mg/L	0.56	
AL02	W1546	93-0833	07/10/07	12:01	Total Nitrogen	mg/L	0.77	
AL02	W1546	93-0919	08/14/07	10:45	Total Nitrogen	mg/L	0.71	
AL02	W1546	93-1027	09/18/07	12:20	Total Nitrogen	mg/L	0.63	
AL02	W1546	93-0623	05/01/07	10:46	Total Phosphorus	mg/L	0.013	
AL02	W1546	93-0727	06/05/07	11:32	Total Phosphorus	mg/L	0.026	
AL02	W1546	93-0833	07/10/07	12:01	Total Phosphorus	mg/L	0.025	
AL02	W1546	93-0919	08/14/07	10:45	Total Phosphorus	mg/L	0.014	
AL02	W1546	93-1027	09/18/07	12:20	Total Phosphorus	mg/L	0.014	
AL02	W1546	93-0623	05/01/07	10:46	Suspended Solids	mg/L	1.4	d
AL02	W1546	93-0727	06/05/07	11:32	Suspended Solids	mg/L	3.4	
AL02	W1546	93-0833	07/10/07	12:01	Suspended Solids	mg/L	<1.0	
AL02	W1546	93-0919	08/14/07	10:45	Suspended Solids	mg/L	<1.0	
AL02	W1546	93-1027	09/18/07	12:20	Suspended Solids	mg/L	<1.0	
AL02	W1546	93-0623	05/01/07	10:46	Turbidity	NTU	1.4	d
AL02	W1546	93-0727	06/05/07	11:32	Turbidity	NTU	2.3	d
AL02	W1546	93-0833	07/10/07	12:01	Turbidity	NTU	1.7	
AL02	W1546	93-0919	08/14/07	10:45	Turbidity	NTU	1.0	
AL02	W1546	93-1027	09/18/07	12:20	Turbidity	NTU	1.5	
AL02	W1546	93-0623	05/01/07	10:46	True Color	PCU	40	
AL02	W1546	93-0727	06/05/07	11:32	True Color	PCU	<75	j
AL02	W1546	93-0833	07/10/07	12:01	True Color	PCU	55	d
AL02	W1546	93-0919	08/14/07	10:45	True Color	PCU	32	
AL02	W1546	93-1027	09/18/07	12:20	True Color	PCU	<15	
AL02	W1546	93-0623	05/01/07	10:46	Apparent Color	PCU	42	
AL02	W1546	93-0727	06/05/07	11:32	Apparent Color	PCU	80	
AL02	W1546	93-0833	07/10/07	12:01	Apparent Color	PCU	60	
AL02	W1546	93-0919	08/14/07	10:45	Apparent Color	PCU	46	
AL02	W1546	93-1027	09/18/07	12:20	Apparent Color	PCU	20	
BB01	W1541	93-0617	05/01/07	10:53	*E. coli*	CFU/100mL	150	
BB01	W1541	93-0721	06/05/07	9:41	*E. coli*	CFU/100mL	3800	
BB01	W1541	93-0825	07/10/07	9:52	*E. coli*	CFU/100mL	470	
BB01	W1541	93-0911	08/14/07	9:02	*E. coli*	CFU/100mL	3800	
BB01	W1541	93-0936	08/30/07	9:25	*E. coli*	CFU/100mL	460	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
BB01	W1541	93-1021	09/18/07	10:04	*E. coli*	CFU/100mL	660	
BB01	W1541	93-0617	05/01/07	10:53	Ammonia-N	mg/L	<0.02	
BB01	W1541	93-0721	06/05/07	9:41	Ammonia-N	mg/L	0.04	
BB01	W1541	93-0825	07/10/07	9:52	Ammonia-N	mg/L	0.06	
BB01	W1541	93-0911	08/14/07	9:02	Ammonia-N	mg/L	0.08	d
BB01	W1541	93-1021	09/18/07	10:04	Ammonia-N	mg/L	0.12	
BB01	W1541	93-0617	05/01/07	10:53	Total Nitrogen	mg/L	0.91	
BB01	W1541	93-0721	06/05/07	9:41	Total Nitrogen	mg/L	0.68	
BB01	W1541	93-0825	07/10/07	9:52	Total Nitrogen	mg/L	1.6	
BB01	W1541	93-0911	08/14/07	9:02	Total Nitrogen	mg/L	1.8	
BB01	W1541	93-1021	09/18/07	10:04	Total Nitrogen	mg/L	2.6	
BB01	W1541	93-0617	05/01/07	10:53	Total Phosphorus	mg/L	0.018	
BB01	W1541	93-0721	06/05/07	9:41	Total Phosphorus	mg/L	0.074	
BB01	W1541	93-0825	07/10/07	9:52	Total Phosphorus	mg/L	0.030	
BB01	W1541	93-0911	08/14/07	9:02	Total Phosphorus	mg/L	0.036	
BB01	W1541	93-1021	09/18/07	10:04	Total Phosphorus	mg/L	0.042	
BB01	W1541	93-0617	05/01/07	10:53	Suspended Solids	mg/L	1.1	
BB01	W1541	93-0721	06/05/07	9:41	Suspended Solids	mg/L	7.6	
BB01	W1541	93-0825	07/10/07	9:52	Suspended Solids	mg/L	1.6	
BB01	W1541	93-0911	08/14/07	9:02	Suspended Solids	mg/L	1.6	
BB01	W1541	93-1021	09/18/07	10:04	Suspended Solids	mg/L	2.4	
BB01	W1541	93-0617	05/01/07	10:53	Turbidity	NTU	1.7	
BB01	W1541	93-0721	06/05/07	9:41	Turbidity	NTU	7.0	
BB01	W1541	93-0825	07/10/07	9:52	Turbidity	NTU	2.4	
BB01	W1541	93-0911	08/14/07	9:02	Turbidity	NTU	1.5	
BB01	W1541	93-1021	09/18/07	10:04	Turbidity	NTU	3.2	
BB01	W1541	93-0617	05/01/07	10:53	True Color	PCU	24	
BB01	W1541	93-0721	06/05/07	9:41	True Color	PCU	<75	j
BB01	W1541	93-0825	07/10/07	9:52	True Color	PCU	##	d, m
BB01	W1541	93-0911	08/14/07	9:02	True Color	PCU	30	
BB01	W1541	93-1021	09/18/07	10:04	True Color	PCU	<15	
BB01	W1541	93-0617	05/01/07	10:53	Apparent Color	PCU	29	
BB01	W1541	93-0721	06/05/07	9:41	Apparent Color	PCU	<75	j
BB01	W1541	93-0825	07/10/07	9:52	Apparent Color	PCU	29	
BB01	W1541	93-0911	08/14/07	9:02	Apparent Color	PCU	30	
BB01	W1541	93-1021	09/18/07	10:04	Apparent Color	PCU	<15	
BB01A	W0448	93-0610	05/01/07	8:46	*E. coli*	CFU/100mL	62	
BB01A	W0448	93-0707	06/05/07	9:07	*E. coli*	CFU/100mL	4600	
BB01A	W0448	93-0811	07/10/07	9:33	*E. coli*	CFU/100mL	590	
BB01A	W0448	93-0897	08/14/07	8:42	*E. coli*	CFU/100mL	880	
BB01A	W0448	93-0922	08/30/07	9:07	*E. coli*	CFU/100mL	1100	
BB01A	W0448	93-1005	09/18/07	9:20	*E. coli*	CFU/100mL	620	
BB01A	W0448	93-0610	05/01/07	8:46	Ammonia-N	mg/L	0.04	
BB01A	W0448	93-0707	06/05/07	9:07	Ammonia-N	mg/L	0.06	
BB01A	W0448	93-0811	07/10/07	9:33	Ammonia-N	mg/L	0.06	
BB01A	W0448	93-0897	08/14/07	8:42	Ammonia-N	mg/L	0.09	
BB01A	W0448	93-1005	09/18/07	9:20	Ammonia-N	mg/L	0.19	
BB01A	W0448	93-0610	05/01/07	8:46	Total Nitrogen	mg/L	1.8	
BB01A	W0448	93-0707	06/05/07	9:07	Total Nitrogen	mg/L	1.7	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
BB01A	W0448	93-0811	07/10/07	9:33	Total Nitrogen	mg/L	1.9	
BB01A	W0448	93-0897	08/14/07	8:42	Total Nitrogen	mg/L	1.4	
BB01A	W0448	93-1005	09/18/07	9:20	Total Nitrogen	mg/L	2.0	
BB01A	W0448	93-0610	05/01/07	8:46	Total Phosphorus	mg/L	0.036	
BB01A	W0448	93-0707	06/05/07	9:07	Total Phosphorus	mg/L	0.074	
BB01A	W0448	93-0811	07/10/07	9:33	Total Phosphorus	mg/L	0.050	
BB01A	W0448	93-0897	08/14/07	8:42	Total Phosphorus	mg/L	0.067	
BB01A	W0448	93-1005	09/18/07	9:20	Total Phosphorus	mg/L	0.048	
BB01A	W0448	93-0610	05/01/07	8:46	Suspended Solids	mg/L	4.5	
BB01A	W0448	93-0707	06/05/07	9:07	Suspended Solids	mg/L	1.6	
BB01A	W0448	93-0811	07/10/07	9:33	Suspended Solids	mg/L	3.8	
BB01A	W0448	93-0897	08/14/07	8:42	Suspended Solids	mg/L	1.8	
BB01A	W0448	93-1005	09/18/07	9:20	Suspended Solids	mg/L	1.6	
BB01A	W0448	93-0610	05/01/07	8:46	Turbidity	NTU	3.2	
BB01A	W0448	93-0707	06/05/07	9:07	Turbidity	NTU	2.8	
BB01A	W0448	93-0811	07/10/07	9:33	Turbidity	NTU	6.2	
BB01A	W0448	93-0897	08/14/07	8:42	Turbidity	NTU	3.8	
BB01A	W0448	93-1005	09/18/07	9:20	Turbidity	NTU	4.3	b
BB01A	W0448	93-0610	05/01/07	8:46	True Color	PCU	110	
BB01A	W0448	93-0707	06/05/07	9:07	True Color	PCU	300	
BB01A	W0448	93-0811	07/10/07	9:33	True Color	PCU	65	
BB01A	W0448	93-0897	08/14/07	8:42	True Color	PCU	55	
BB01A	W0448	93-1005	09/18/07	9:20	True Color	PCU	24	
BB01A	W0448	93-0610	05/01/07	8:46	Apparent Color	PCU	110	
BB01A	W0448	93-0707	06/05/07	9:07	Apparent Color	PCU	320	
BB01A	W0448	93-0811	07/10/07	9:33	Apparent Color	PCU	100	
BB01A	W0448	93-0897	08/14/07	8:42	Apparent Color	PCU	65	
BB01A	W0448	93-1005	09/18/07	9:20	Apparent Color	PCU	26	
BB01A	W0448	93-0610	05/01/07	8:46	Hardness	mg/L	100	
BB01A	W0448	93-0811	07/10/07	9:33	Hardness	mg/L	160	
BB01A	W0448	93-1005	09/18/07	9:20	Hardness	mg/L	200	
BP01	W0878	93-0605	05/01/07	11:27	*E. coli*	CFU/100mL	280	j
BP01	W0878	93-0712	06/05/07	10:42	*E. coli*	CFU/100mL	3200	
BP01	W0878	93-0816	07/10/07	10:42	*E. coli*	CFU/100mL	1100	
BP01	W0878	93-0902	08/14/07	10:07	*E. coli*	CFU/100mL	3000	
BP01	W0878	93-0927	08/30/07	10:20	*E. coli*	CFU/100mL	1200	
BP01	W0878	93-1012	09/18/07	10:41	*E. coli*	CFU/100mL	1100	
BP01	W0878	93-0605	05/01/07	11:27	Ammonia-N	mg/L	<0.02	
BP01	W0878	93-0712	06/05/07	10:42	Ammonia-N	mg/L	0.09	
BP01	W0878	93-0816	07/10/07	10:42	Ammonia-N	mg/L	0.03	
BP01	W0878	93-0902	08/14/07	10:07	Ammonia-N	mg/L	0.02	
BP01	W0878	93-1012	09/18/07	10:41	Ammonia-N	mg/L	0.02	
BP01	W0878	93-0605	05/01/07	11:27	Total Nitrogen	mg/L	1.4	
BP01	W0878	93-0712	06/05/07	10:42	Total Nitrogen	mg/L	1.4	
BP01	W0878	93-0816	07/10/07	10:42	Total Nitrogen	mg/L	1.9	
BP01	W0878	93-0902	08/14/07	10:07	Total Nitrogen	mg/L	2.0	
BP01	W0878	93-1012	09/18/07	10:41	Total Nitrogen	mg/L	2.2	
BP01	W0878	93-0605	05/01/07	11:27	Total Phosphorus	mg/L	0.017	
BP01	W0878	93-0712	06/05/07	10:42	Total Phosphorus	mg/L	0.054	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
BP01	W0878	93-0816	07/10/07	10:42	Total Phosphorus	mg/L	0.034	
BP01	W0878	93-0902	08/14/07	10:07	Total Phosphorus	mg/L	0.030	
BP01	W0878	93-1012	09/18/07	10:41	Total Phosphorus	mg/L	0.042	
BP01	W0878	93-0605	05/01/07	11:27	Suspended Solids	mg/L	1.2	
BP01	W0878	93-0712	06/05/07	10:42	Suspended Solids	mg/L	4.0	
BP01	W0878	93-0816	07/10/07	10:42	Suspended Solids	mg/L	1.7	
BP01	W0878	93-0902	08/14/07	10:07	Suspended Solids	mg/L	2.4	
BP01	W0878	93-1012	09/18/07	10:41	Suspended Solids	mg/L	1.1	
BP01	W0878	93-0605	05/01/07	11:27	Turbidity	NTU	1.7	
BP01	W0878	93-0712	06/05/07	10:42	Turbidity	NTU	2.5	d
BP01	W0878	93-0816	07/10/07	10:42	Turbidity	NTU	2.9	
BP01	W0878	93-0902	08/14/07	10:07	Turbidity	NTU	2.8	
BP01	W0878	93-1012	09/18/07	10:41	Turbidity	NTU	3.9	b
BP01	W0878	93-0605	05/01/07	11:27	True Color	PCU	32	
BP01	W0878	93-0712	06/05/07	10:42	True Color	PCU	60	d
BP01	W0878	93-0816	07/10/07	10:42	True Color	PCU	27	
BP01	W0878	93-0902	08/14/07	10:07	True Color	PCU	18	
BP01	W0878	93-1012	09/18/07	10:41	True Color	PCU	<15	
BP01	W0878	93-0605	05/01/07	11:27	Apparent Color	PCU	34	
BP01	W0878	93-0712	06/05/07	10:42	Apparent Color	PCU	70	
BP01	W0878	93-0816	07/10/07	10:42	Apparent Color	PCU	31	
BP01	W0878	93-0902	08/14/07	10:07	Apparent Color	PCU	33	
BP01	W0878	93-1012	09/18/07	10:41	Apparent Color	PCU	<15	
CB01	W0888	93-0621	05/01/07	9:52	*E. coli*	CFU/100mL	19	j
CB01	W0888	93-0725	06/05/07	11:00	*E. coli*	CFU/100mL	3300	
CB01	W0888	93-0829	07/10/07	11:26	*E. coli*	CFU/100mL	110	
CB01	W0888	93-1025	09/18/07	11:45	*E. coli*	CFU/100mL	120	
CB01	W0888	93-0621	05/01/07	9:52	Ammonia-N	mg/L	<0.02	
CB01	W0888	93-0725	06/05/07	11:00	Ammonia-N	mg/L	0.06	
CB01	W0888	93-0829	07/10/07	11:26	Ammonia-N	mg/L	0.12	
CB01	W0888	93-1025	09/18/07	11:45	Ammonia-N	mg/L	0.22	
CB01	W0888	93-0621	05/01/07	9:52	Total Nitrogen	mg/L	0.45	
CB01	W0888	93-0725	06/05/07	11:00	Total Nitrogen	mg/L	0.82	
CB01	W0888	93-0829	07/10/07	11:26	Total Nitrogen	mg/L	0.99	
CB01	W0888	93-1025	09/18/07	11:45	Total Nitrogen	mg/L	0.84	
CB01	W0888	93-0621	05/01/07	9:52	Total Phosphorus	mg/L	0.022	
CB01	W0888	93-0725	06/05/07	11:00	Total Phosphorus	mg/L	0.058	
CB01	W0888	93-0829	07/10/07	11:26	Total Phosphorus	mg/L	0.11	
CB01	W0888	93-1025	09/18/07	11:45	Total Phosphorus	mg/L	0.057	
CB01	W0888	93-0621	05/01/07	9:52	Suspended Solids	mg/L	3.1	
CB01	W0888	93-0725	06/05/07	11:00	Suspended Solids	mg/L	4.7	
CB01	W0888	93-0829	07/10/07	11:26	Suspended Solids	mg/L	17	
CB01	W0888	93-1025	09/18/07	11:45	Suspended Solids	mg/L	11	
CB01	W0888	93-0621	05/01/07	9:52	Turbidity	NTU	4.0	
CB01	W0888	93-0725	06/05/07	11:00	Turbidity	NTU	5.8	
CB01	W0888	93-0829	07/10/07	11:26	Turbidity	NTU	22.0	
CB01	W0888	93-1025	09/18/07	11:45	Turbidity	NTU	6.2	
CB01	W0888	93-0621	05/01/07	9:52	True Color	PCU	45	
CB01	W0888	93-0725	06/05/07	11:00	True Color	PCU	<75	j

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
CB01	W0888	93-0829	07/10/07	11:26	True Color	PCU	130	d
CB01	W0888	93-1025	09/18/07	11:45	True Color	PCU	16	
CB01	W0888	93-0621	05/01/07	9:52	Apparent Color	PCU	46	
CB01	W0888	93-0725	06/05/07	11:00	Apparent Color	PCU	140	
CB01	W0888	93-0829	07/10/07	11:26	Apparent Color	PCU	150	
CB01	W0888	93-1025	09/18/07	11:45	Apparent Color	PCU	42	
CC01	W1542	93-0620	05/01/07	9:23	*E. coli*	CFU/100mL	19	j
CC01	W1542	93-0724	06/05/07	10:37	*E. coli*	CFU/100mL	330	
CC01	W1542	93-0828	07/10/07	10:59	*E. coli*	CFU/100mL	3000	
CC01	W1542	93-0914	08/14/07	9:49	*E. coli*	CFU/100mL	910	
CC01	W1542	93-0939	08/30/07	10:11	*E. coli*	CFU/100mL	190	
CC01	W1542	93-1024	09/18/07	11:20	*E. coli*	CFU/100mL	2600	
CC01	W1542	93-0620	05/01/07	9:23	Enterococci	CFU/100mL	23	
CC01	W1542	93-0724	06/05/07	10:37	Enterococci	CFU/100mL	4600	
CC01	W1542	93-0620	05/01/07	9:23	Ammonia-N	mg/L	0.04	
CC01	W1542	93-0724	06/05/07	10:37	Ammonia-N	mg/L	0.08	
CC01	W1542	93-0828	07/10/07	10:59	Ammonia-N	mg/L	0.05	
CC01	W1542	93-0914	08/14/07	9:49	Ammonia-N	mg/L	0.03	d
CC01	W1542	93-1024	09/18/07	11:20	Ammonia-N	mg/L	0.03	
CC01	W1542	93-0620	05/01/07	9:23	Total Nitrogen	mg/L	0.93	
CC01	W1542	93-0724	06/05/07	10:37	Total Nitrogen	mg/L	0.89	
CC01	W1542	93-0828	07/10/07	10:59	Total Nitrogen	mg/L	1.6	
CC01	W1542	93-0914	08/14/07	9:49	Total Nitrogen	mg/L	1.6	
CC01	W1542	93-1024	09/18/07	11:20	Total Nitrogen	mg/L	1.8	
CC01	W1542	93-0620	05/01/07	9:23	Total Phosphorus	mg/L	0.021	
CC01	W1542	93-0724	06/05/07	10:37	Total Phosphorus	mg/L	0.044	
CC01	W1542	93-0828	07/10/07	10:59	Total Phosphorus	mg/L	0.030	
CC01	W1542	93-0914	08/14/07	9:49	Total Phosphorus	mg/L	0.024	
CC01	W1542	93-1024	09/18/07	11:20	Total Phosphorus	mg/L	0.024	
CC01	W1542	93-0620	05/01/07	9:23	Suspended Solids	mg/L	2.1	
CC01	W1542	93-0724	06/05/07	10:37	Suspended Solids	mg/L	3.7	
CC01	W1542	93-0828	07/10/07	10:59	Suspended Solids	mg/L	1.0	
CC01	W1542	93-0914	08/14/07	9:49	Suspended Solids	mg/L	<1.0	
CC01	W1542	93-1024	09/18/07	11:20	Suspended Solids	mg/L	1.6	
CC01	W1542	93-0620	05/01/07	9:23	Turbidity	NTU	2.4	
CC01	W1542	93-0724	06/05/07	10:37	Turbidity	NTU	4.5	
CC01	W1542	93-0828	07/10/07	10:59	Turbidity	NTU	5.6	
CC01	W1542	93-0914	08/14/07	9:49	Turbidity	NTU	3.9	
CC01	W1542	93-1024	09/18/07	11:20	Turbidity	NTU	4.7	
CC01	W1542	93-0620	05/01/07	9:23	True Color	PCU	39	
CC01	W1542	93-0724	06/05/07	10:37	True Color	PCU	85	
CC01	W1542	93-0828	07/10/07	10:59	True Color	PCU	48	d
CC01	W1542	93-0914	08/14/07	9:49	True Color	PCU	24	
CC01	W1542	93-1024	09/18/07	11:20	True Color	PCU	<15	
CC01	W1542	93-0620	05/01/07	9:23	Apparent Color	PCU	48	
CC01	W1542	93-0724	06/05/07	10:37	Apparent Color	PCU	140	
CC01	W1542	93-0828	07/10/07	10:59	Apparent Color	PCU	60	
CC01	W1542	93-0914	08/14/07	9:49	Apparent Color	PCU	48	
CC01	W1542	93-1024	09/18/07	11:20	Apparent Color	PCU	<15	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
CR01	W0452	93-0615	05/01/07	10:19	*E. coli*	CFU/100mL	67	
CR01	W0452	93-0719	06/05/07	9:08	*E. coli*	CFU/100mL	3400	
CR01	W0452	93-0823	07/10/07	9:25	*E. coli*	CFU/100mL	240	
CR01	W0452	93-0909	08/14/07	8:40	*E. coli*	CFU/100mL	2700	
CR01	W0452	93-0934	08/30/07	9:10	*E. coli*	CFU/100mL	210	
CR01	W0452	93-1017	09/18/07	9:36	*E. coli*	CFU/100mL	230	
CR01	W0452	93-0615	05/01/07	10:19	Ammonia-N	mg/L	0.07	
CR01	W0452	93-0719	06/05/07	9:08	Ammonia-N	mg/L	0.14	
CR01	W0452	93-0823	07/10/07	9:25	Ammonia-N	mg/L	0.08	
CR01	W0452	93-0909	08/14/07	8:40	Ammonia-N	mg/L	0.07	d
CR01	W0452	93-1017	09/18/07	9:36	Ammonia-N	mg/L	0.06	
CR01	W0452	93-0615	05/01/07	10:19	Total Nitrogen	mg/L	1.3	
CR01	W0452	93-0719	06/05/07	9:08	Total Nitrogen	mg/L	1.1	
CR01	W0452	93-0823	07/10/07	9:25	Total Nitrogen	mg/L	1.2	
CR01	W0452	93-0909	08/14/07	8:40	Total Nitrogen	mg/L	1.1	
CR01	W0452	93-1017	09/18/07	9:36	Total Nitrogen	mg/L	1.1	
CR01	W0452	93-0615	05/01/07	10:19	Total Phosphorus	mg/L	0.023	
CR01	W0452	93-0719	06/05/07	9:08	Total Phosphorus	mg/L	0.059	
CR01	W0452	93-0823	07/10/07	9:25	Total Phosphorus	mg/L	0.044	
CR01	W0452	93-0909	08/14/07	8:40	Total Phosphorus	mg/L	0.057	
CR01	W0452	93-1017	09/18/07	9:36	Total Phosphorus	mg/L	0.029	
CR01	W0452	93-0615	05/01/07	10:19	Suspended Solids	mg/L	2.5	
CR01	W0452	93-0719	06/05/07	9:08	Suspended Solids	mg/L	6.1	
CR01	W0452	93-0823	07/10/07	9:25	Suspended Solids	mg/L	4.8	
CR01	W0452	93-0909	08/14/07	8:40	Suspended Solids	mg/L	4.4	
CR01	W0452	93-1017	09/18/07	9:36	Suspended Solids	mg/L	2.3	
CR01	W0452	93-0615	05/01/07	10:19	Turbidity	NTU	3.2	
CR01	W0452	93-0719	06/05/07	9:08	Turbidity	NTU	5.6	
CR01	W0452	93-0823	07/10/07	9:25	Turbidity	NTU	4.9	
CR01	W0452	93-0909	08/14/07	8:40	Turbidity	NTU	4.8	
CR01	W0452	93-1017	09/18/07	9:36	Turbidity	NTU	2.8	
CR01	W0452	93-0615	05/01/07	10:19	True Color	PCU	22	
CR01	W0452	93-0719	06/05/07	9:08	True Color	PCU	30	
CR01	W0452	93-0823	07/10/07	9:25	True Color	PCU	30	d
CR01	W0452	93-0909	08/14/07	8:40	True Color	PCU	35	
CR01	W0452	93-1017	09/18/07	9:36	True Color	PCU	18	
CR01	W0452	93-0615	05/01/07	10:19	Apparent Color	PCU	30	
CR01	W0452	93-0719	06/05/07	9:08	Apparent Color	PCU	65	
CR01	W0452	93-0823	07/10/07	9:25	Apparent Color	PCU	45	
CR01	W0452	93-0909	08/14/07	8:40	Apparent Color	PCU	55	
CR01	W0452	93-1017	09/18/07	9:36	Apparent Color	PCU	22	
CR02	W0451	93-0616	05/01/07	10:35	*E. coli*	CFU/100mL	110	
CR02	W0451	93-0720	06/05/07	9:26	*E. coli*	CFU/100mL	1600	p
CR02	W0451	93-0824	07/10/07	9:38	*E. coli*	CFU/100mL	410	
CR02	W0451	93-0910	08/14/07	8:45	*E. coli*	CFU/100mL	2800	
CR02	W0451	93-0935	08/30/07	9:20	*E. coli*	CFU/100mL	290	
CR02	W0451	93-1020	09/18/07	9:49	*E. coli*	CFU/100mL	180	
CR02	W0451	93-0616	05/01/07	10:35	Ammonia-N	mg/L	0.14	
CR02	W0451	93-0720	06/05/07	9:26	Ammonia-N	mg/L	0.20	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
CR02	W0451	93-0824	07/10/07	9:38	Ammonia-N	mg/L	0.12	
CR02	W0451	93-0910	08/14/07	8:45	Ammonia-N	mg/L	0.08	d
CR02	W0451	93-1020	09/18/07	9:49	Ammonia-N	mg/L	0.12	
CR02	W0451	93-0616	05/01/07	10:35	Total Nitrogen	mg/L	1.6	
CR02	W0451	93-0720	06/05/07	9:26	Total Nitrogen	mg/L	1.4	
CR02	W0451	93-0824	07/10/07	9:38	Total Nitrogen	mg/L	1.5	
CR02	W0451	93-0910	08/14/07	8:45	Total Nitrogen	mg/L	1.2	
CR02	W0451	93-1020	09/18/07	9:49	Total Nitrogen	mg/L	1.6	
CR02	W0451	93-0616	05/01/07	10:35	Total Phosphorus	mg/L	0.016	
CR02	W0451	93-0720	06/05/07	9:26	Total Phosphorus	mg/L	0.046	
CR02	W0451	93-0824	07/10/07	9:38	Total Phosphorus	mg/L	0.037	
CR02	W0451	93-0910	08/14/07	8:45	Total Phosphorus	mg/L	0.039	
CR02	W0451	93-1020	09/18/07	9:49	Total Phosphorus	mg/L	0.016	
CR02	W0451	93-0616	05/01/07	10:35	Suspended Solids	mg/L	2.2	
CR02	W0451	93-0720	06/05/07	9:26	Suspended Solids	mg/L	4.4	
CR02	W0451	93-0824	07/10/07	9:38	Suspended Solids	mg/L	2.0	
CR02	W0451	93-0910	08/14/07	8:45	Suspended Solids	mg/L	1.4	
CR02	W0451	93-1020	09/18/07	9:49	Suspended Solids	mg/L	<1.0	
CR02	W0451	93-0616	05/01/07	10:35	Turbidity	NTU	2.3	
CR02	W0451	93-0720	06/05/07	9:26	Turbidity	NTU	3.6	
CR02	W0451	93-0824	07/10/07	9:38	Turbidity	NTU	5.8	
CR02	W0451	93-0910	08/14/07	8:45	Turbidity	NTU	3.2	
CR02	W0451	93-1020	09/18/07	9:49	Turbidity	NTU	3.3	
CR02	W0451	93-0616	05/01/07	10:35	True Color	PCU	22	
CR02	W0451	93-0720	06/05/07	9:26	True Color	PCU	24	
CR02	W0451	93-0824	07/10/07	9:38	True Color	PCU	26	d
CR02	W0451	93-0910	08/14/07	8:45	True Color	PCU	30	
CR02	W0451	93-1020	09/18/07	9:49	True Color	PCU	<15	
CR02	W0451	93-0616	05/01/07	10:35	Apparent Color	PCU	24	
CR02	W0451	93-0720	06/05/07	9:26	Apparent Color	PCU	55	
CR02	W0451	93-0824	07/10/07	9:38	Apparent Color	PCU	47	
CR02	W0451	93-0910	08/14/07	8:45	Apparent Color	PCU	55	
CR02	W0451	93-1020	09/18/07	9:49	Apparent Color	PCU	<15	
CT01	W1543	93-0619	05/01/07	8:52	*E. coli*	CFU/100mL	43	j
CT01	W1543	93-0723	06/05/07	10:25	*E. coli*	CFU/100mL	1600	
CT01	W1543	93-0827	07/10/07	10:26	*E. coli*	CFU/100mL	100	
CT01	W1543	93-0913	08/14/07	9:34	*E. coli*	CFU/100mL	290	
CT01	W1543	93-1023	09/18/07	11:00	*E. coli*	CFU/100mL	67	
CT01	W1543	93-0619	05/01/07	8:52	Enterococci	CFU/100mL	63	
CT01	W1543	93-0723	06/05/07	10:25	Enterococci	CFU/100mL	14000	
CT01	W1543	93-0619	05/01/07	8:52	Ammonia-N	mg/L	0.03	
CT01	W1543	93-0723	06/05/07	10:25	Ammonia-N	mg/L	0.14	
CT01	W1543	93-0827	07/10/07	10:26	Ammonia-N	mg/L	0.02	
CT01	W1543	93-0913	08/14/07	9:34	Ammonia-N	mg/L	0.04	d
CT01	W1543	93-1023	09/18/07	11:00	Ammonia-N	mg/L	0.04	
CT01	W1543	93-0619	05/01/07	8:52	Total Nitrogen	mg/L	0.53	
CT01	W1543	93-0723	06/05/07	10:25	Total Nitrogen	mg/L	0.86	
CT01	W1543	93-0827	07/10/07	10:26	Total Nitrogen	mg/L	1.6	
CT01	W1543	93-0913	08/14/07	9:34	Total Nitrogen	mg/L	1.8	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
CT01	W1543	93-1023	09/18/07	11:00	Total Nitrogen	mg/L	1.4	
CT01	W1543	93-0619	05/01/07	8:52	Total Phosphorus	mg/L	0.020	
CT01	W1543	93-0723	06/05/07	10:25	Total Phosphorus	mg/L	0.078	
CT01	W1543	93-0827	07/10/07	10:26	Total Phosphorus	mg/L	0.024	
CT01	W1543	93-0913	08/14/07	9:34	Total Phosphorus	mg/L	0.014	
CT01	W1543	93-1023	09/18/07	11:00	Total Phosphorus	mg/L	0.015	
CT01	W1543	93-0619	05/01/07	8:52	Suspended Solids	mg/L	1.7	
CT01	W1543	93-0723	06/05/07	10:25	Suspended Solids	mg/L	6.0	
CT01	W1543	93-0827	07/10/07	10:26	Suspended Solids	mg/L	15	
CT01	W1543	93-0913	08/14/07	9:34	Suspended Solids	mg/L	<1.0	
CT01	W1543	93-1023	09/18/07	11:00	Suspended Solids	mg/L	<1.0	
CT01	W1543	93-0619	05/01/07	8:52	Turbidity	NTU	2.8	
CT01	W1543	93-0723	06/05/07	10:25	Turbidity	NTU	5.9	
CT01	W1543	93-0827	07/10/07	10:26	Turbidity	NTU	4.3	
CT01	W1543	93-0913	08/14/07	9:34	Turbidity	NTU	0.7	
CT01	W1543	93-1023	09/18/07	11:00	Turbidity	NTU	1.1	
CT01	W1543	93-0619	05/01/07	8:52	True Color	PCU	36	
CT01	W1543	93-0723	06/05/07	10:25	True Color	PCU	110	
CT01	W1543	93-0827	07/10/07	10:26	True Color	PCU	60	d
CT01	W1543	93-0913	08/14/07	9:34	True Color	PCU	<15	
CT01	W1543	93-1023	09/18/07	11:00	True Color	PCU	<15	
CT01	W1543	93-0619	05/01/07	8:52	Apparent Color	PCU	43	
CT01	W1543	93-0723	06/05/07	10:25	Apparent Color	PCU	160	
CT01	W1543	93-0827	07/10/07	10:26	Apparent Color	PCU	110	
CT01	W1543	93-0913	08/14/07	9:34	Apparent Color	PCU	<15	
CT01	W1543	93-1023	09/18/07	11:00	Apparent Color	PCU	<15	
FF02	W1540	93-0618	05/01/07	11:15	*E. coli*	CFU/100mL	24	
FF02	W1540	93-0722	06/05/07	9:56	*E. coli*	CFU/100mL	2300	
FF02	W1540	93-0826	07/10/07	10:06	*E. coli*	CFU/100mL	450	
FF02	W1540	93-0912	08/14/07	9:14	*E. coli*	CFU/100mL	3700	
FF02	W1540	93-0937	08/30/07	9:38	*E. coli*	CFU/100mL	480	
FF02	W1540	93-1022	09/18/07	10:21	*E. coli*	CFU/100mL	510	
FF02	W1540	93-0618	05/01/07	11:15	Enterococci	CFU/100mL	20	
FF02	W1540	93-0722	06/05/07	9:56	Enterococci	CFU/100mL	21000	
FF02	W1540	93-0618	05/01/07	11:15	Ammonia-N	mg/L	<0.02	
FF02	W1540	93-0722	06/05/07	9:56	Ammonia-N	mg/L	0.08	
FF02	W1540	93-0826	07/10/07	10:06	Ammonia-N	mg/L	0.04	
FF02	W1540	93-0912	08/14/07	9:14	Ammonia-N	mg/L	0.02	d
FF02	W1540	93-1022	09/18/07	10:21	Ammonia-N	mg/L	0.03	
FF02	W1540	93-0618	05/01/07	11:15	Total Nitrogen	mg/L	1.4	
FF02	W1540	93-0722	06/05/07	9:56	Total Nitrogen	mg/L	1.2	
FF02	W1540	93-0826	07/10/07	10:06	Total Nitrogen	mg/L	1.5	
FF02	W1540	93-0912	08/14/07	9:14	Total Nitrogen	mg/L	1.0	
FF02	W1540	93-1022	09/18/07	10:21	Total Nitrogen	mg/L	1.9	
FF02	W1540	93-0618	05/01/07	11:15	Total Phosphorus	mg/L	0.018	
FF02	W1540	93-0722	06/05/07	9:56	Total Phosphorus	mg/L	0.049	
FF02	W1540	93-0826	07/10/07	10:06	Total Phosphorus	mg/L	0.028	
FF02	W1540	93-0912	08/14/07	9:14	Total Phosphorus	mg/L	0.046	
FF02	W1540	93-1022	09/18/07	10:21	Total Phosphorus	mg/L	0.018	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
FF02	W1540	93-0618	05/01/07	11:15	Suspended Solids	mg/L	1.6	
FF02	W1540	93-0722	06/05/07	9:56	Suspended Solids	mg/L	3.2	
FF02	W1540	93-0826	07/10/07	10:06	Suspended Solids	mg/L	<1.0	
FF02	W1540	93-0912	08/14/07	9:14	Suspended Solids	mg/L	2.0	
FF02	W1540	93-1022	09/18/07	10:21	Suspended Solids	mg/L	<1.0	
FF02	W1540	93-0618	05/01/07	11:15	Turbidity	NTU	2.0	
FF02	W1540	93-0722	06/05/07	9:56	Turbidity	NTU	4.1	
FF02	W1540	93-0826	07/10/07	10:06	Turbidity	NTU	3.3	
FF02	W1540	93-0912	08/14/07	9:14	Turbidity	NTU	2.8	
FF02	W1540	93-1022	09/18/07	10:21	Turbidity	NTU	1.0	
FF02	W1540	93-0618	05/01/07	11:15	True Color	PCU	24	
FF02	W1540	93-0722	06/05/07	9:56	True Color	PCU	<75	j
FF02	W1540	93-0826	07/10/07	10:06	True Color	PCU	22	d
FF02	W1540	93-0912	08/14/07	9:14	True Color	PCU	35	
FF02	W1540	93-1022	09/18/07	10:21	True Color	PCU	<15	
FF02	W1540	93-0618	05/01/07	11:15	Apparent Color	PCU	33	
FF02	W1540	93-0722	06/05/07	9:56	Apparent Color	PCU	85	
FF02	W1540	93-0826	07/10/07	10:06	Apparent Color	PCU	31	
FF02	W1540	93-0912	08/14/07	9:14	Apparent Color	PCU	55	
FF02	W1540	93-1022	09/18/07	10:21	Apparent Color	PCU	<15	
GB01	W0454	93-0613	05/01/07	9:25	*E. coli*	CFU/100mL	33	
GB01	W0454	93-0717	06/05/07	11:35	*E. coli*	CFU/100mL	2300	
GB01	W0454	93-0821	07/10/07	11:32	*E. coli*	CFU/100mL	410	
GB01	W0454	93-0907	08/14/07	11:05	*E. coli*	CFU/100mL	400	
GB01	W0454	93-0932	08/30/07	11:05	*E. coli*	CFU/100mL	10	
GB01	W0454	93-1015	09/18/07	11:38	*E. coli*	CFU/100mL	95	
GB01	W0454	93-0613	05/01/07	9:25	Ammonia-N	mg/L	<0.02	
GB01	W0454	93-0717	06/05/07	11:35	Ammonia-N	mg/L	0.11	
GB01	W0454	93-0821	07/10/07	11:32	Ammonia-N	mg/L	0.04	
GB01	W0454	93-0907	08/14/07	11:05	Ammonia-N	mg/L	0.11	
GB01	W0454	93-1015	09/18/07	11:38	Ammonia-N	mg/L	0.17	
GB01	W0454	93-0613	05/01/07	9:25	Total Nitrogen	mg/L	1.1	
GB01	W0454	93-0717	06/05/07	11:35	Total Nitrogen	mg/L	0.80	
GB01	W0454	93-0821	07/10/07	11:32	Total Nitrogen	mg/L	0.58	
GB01	W0454	93-0907	08/14/07	11:05	Total Nitrogen	mg/L	0.98	
GB01	W0454	93-1015	09/18/07	11:38	Total Nitrogen	mg/L	0.60	
GB01	W0454	93-0613	05/01/07	9:25	Total Phosphorus	mg/L	0.021	
GB01	W0454	93-0717	06/05/07	11:35	Total Phosphorus	mg/L	0.038	
GB01	W0454	93-0821	07/10/07	11:32	Total Phosphorus	mg/L	0.037	
GB01	W0454	93-0907	08/14/07	11:05	Total Phosphorus	mg/L	0.054	
GB01	W0454	93-1015	09/18/07	11:38	Total Phosphorus	mg/L	0.040	
GB01	W0454	93-0613	05/01/07	9:25	Suspended Solids	mg/L	1.9	
GB01	W0454	93-0717	06/05/07	11:35	Suspended Solids	mg/L	2.7	
GB01	W0454	93-0821	07/10/07	11:32	Suspended Solids	mg/L	2.4	
GB01	W0454	93-0907	08/14/07	11:05	Suspended Solids	mg/L	1.8	
GB01	W0454	93-1015	09/18/07	11:38	Suspended Solids	mg/L	2.4	
GB01	W0454	93-0613	05/01/07	9:25	Turbidity	NTU	1.9	
GB01	W0454	93-0717	06/05/07	11:35	Turbidity	NTU	3.1	
GB01	W0454	93-0821	07/10/07	11:32	Turbidity	NTU	2.8	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
GB01	W0454	93-0907	08/14/07	11:05	Turbidity	NTU	1.9	
GB01	W0454	93-1015	09/18/07	11:38	Turbidity	NTU	3.7	b
GB01	W0454	93-0613	05/01/07	9:25	True Color	PCU	22	
GB01	W0454	93-0717	06/05/07	11:35	True Color	PCU	26	
GB01	W0454	93-0821	07/10/07	11:32	True Color	PCU	26	
GB01	W0454	93-0907	08/14/07	11:05	True Color	PCU	17	
GB01	W0454	93-1015	09/18/07	11:38	True Color	PCU	<15	
GB01	W0454	93-0613	05/01/07	9:25	Apparent Color	PCU	29	
GB01	W0454	93-0717	06/05/07	11:35	Apparent Color	PCU	28	
GB01	W0454	93-0821	07/10/07	11:32	Apparent Color	PCU	47	
GB01	W0454	93-0907	08/14/07	11:05	Apparent Color	PCU	20	
GB01	W0454	93-1015	09/18/07	11:38	Apparent Color	PCU	20	
GB01	W0454	93-0821	07/10/07	11:32	Hardness	mg/L	100	
GB01	W0454	93-1015	09/18/07	11:38	Hardness	mg/L	140	
HB01	W0435	93-0606	05/01/07	11:57	*E. coli*	CFU/100mL	5	j
HB01	W0435	93-0715	06/05/07	10:57	*E. coli*	CFU/100mL	2400	
HB01	W0435	93-0817	07/10/07	11:04	*E. coli*	CFU/100mL	320	
HB01	W0435	93-0903	08/14/07	10:28	*E. coli*	CFU/100mL	2500	
HB01	W0435	93-0928	08/30/07	10:31	*E. coli*	CFU/100mL	770	
HB01	W0435	93-1013	09/18/07	10:55	*E. coli*	CFU/100mL	190	
HB01	W0435	93-0606	05/01/07	11:57	Ammonia-N	mg/L	0.06	
HB01	W0435	93-0715	06/05/07	10:57	Ammonia-N	mg/L	0.18	
HB01	W0435	93-0817	07/10/07	11:04	Ammonia-N	mg/L	0.09	
HB01	W0435	93-0903	08/14/07	10:28	Ammonia-N	mg/L	0.09	
HB01	W0435	93-1013	09/18/07	10:55	Ammonia-N	mg/L	0.05	
HB01	W0435	93-0606	05/01/07	11:57	Total Nitrogen	mg/L	1.6	
HB01	W0435	93-0715	06/05/07	10:57	Total Nitrogen	mg/L	1.7	
HB01	W0435	93-0817	07/10/07	11:04	Total Nitrogen	mg/L	1.4	
HB01	W0435	93-0903	08/14/07	10:28	Total Nitrogen	mg/L	1.1	
HB01	W0435	93-1013	09/18/07	10:55	Total Nitrogen	mg/L	1.1	
HB01	W0435	93-0606	05/01/07	11:57	Total Phosphorus	mg/L	0.022	
HB01	W0435	93-0715	06/05/07	10:57	Total Phosphorus	mg/L	0.061	
HB01	W0435	93-0817	07/10/07	11:04	Total Phosphorus	mg/L	0.066	
HB01	W0435	93-0903	08/14/07	10:28	Total Phosphorus	mg/L	0.048	
HB01	W0435	93-1013	09/18/07	10:55	Total Phosphorus	mg/L	0.025	
HB01	W0435	93-0606	05/01/07	11:57	Suspended Solids	mg/L	2.1	
HB01	W0435	93-0715	06/05/07	10:57	Suspended Solids	mg/L	2.7	
HB01	W0435	93-0817	07/10/07	11:04	Suspended Solids	mg/L	10	
HB01	W0435	93-0903	08/14/07	10:28	Suspended Solids	mg/L	4.6	
HB01	W0435	93-1013	09/18/07	10:55	Suspended Solids	mg/L	1.5	
HB01	W0435	93-0606	05/01/07	11:57	Turbidity	NTU	2.5	
HB01	W0435	93-0715	06/05/07	10:57	Turbidity	NTU	3.6	
HB01	W0435	93-0817	07/10/07	11:04	Turbidity	NTU	7.4	
HB01	W0435	93-0903	08/14/07	10:28	Turbidity	NTU	6.7	
HB01	W0435	93-1013	09/18/07	10:55	Turbidity	NTU	4.4	b
HB01	W0435	93-0606	05/01/07	11:57	True Color	PCU	15	
HB01	W0435	93-0715	06/05/07	10:57	True Color	PCU	25	
HB01	W0435	93-0817	07/10/07	11:04	True Color	PCU	30	
HB01	W0435	93-0903	08/14/07	10:28	True Color	PCU	27	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
HB01	W0435	93-1013	09/18/07	10:55	True Color	PCU	<15	
HB01	W0435	93-0606	05/01/07	11:57	Apparent Color	PCU	18	
HB01	W0435	93-0715	06/05/07	10:57	Apparent Color	PCU	46	
HB01	W0435	93-0817	07/10/07	11:04	Apparent Color	PCU	60	
HB01	W0435	93-0903	08/14/07	10:28	Apparent Color	PCU	70	
HB01	W0435	93-1013	09/18/07	10:55	Apparent Color	PCU	20	
HB02	W0436	93-0607	05/01/07	12:15	*E. coli*	CFU/100mL	200	j
HB02	W0436	93-0716	06/05/07	11:16	*E. coli*	CFU/100mL	2700	
HB02	W0436	93-0818	07/10/07	11:16	*E. coli*	CFU/100mL	770	
HB02	W0436	93-0904	08/14/07	10:44	*E. coli*	CFU/100mL	4000	
HB02	W0436	93-0929	08/30/07	10:43	*E. coli*	CFU/100mL	410	
HB02	W0436	93-1014	09/18/07	11:11	*E. coli*	CFU/100mL	990	
HB02	W0436	93-0607	05/01/07	12:15	Ammonia-N	mg/L	0.05	
HB02	W0436	93-0716	06/05/07	11:16	Ammonia-N	mg/L	0.13	
HB02	W0436	93-0818	07/10/07	11:16	Ammonia-N	mg/L	0.03	d
HB02	W0436	93-0904	08/14/07	10:44	Ammonia-N	mg/L	0.03	
HB02	W0436	93-1014	09/18/07	11:11	Ammonia-N	mg/L	<0.02	
HB02	W0436	93-0607	05/01/07	12:15	Total Nitrogen	mg/L	1.9	
HB02	W0436	93-0716	06/05/07	11:16	Total Nitrogen	mg/L	1.5	
HB02	W0436	93-0818	07/10/07	11:16	Total Nitrogen	mg/L	1.8	
HB02	W0436	93-0904	08/14/07	10:44	Total Nitrogen	mg/L	1.4	
HB02	W0436	93-1014	09/18/07	11:11	Total Nitrogen	mg/L	2.4	
HB02	W0436	93-0607	05/01/07	12:15	Total Phosphorus	mg/L	0.049	
HB02	W0436	93-0716	06/05/07	11:16	Total Phosphorus	mg/L	0.11	
HB02	W0436	93-0818	07/10/07	11:16	Total Phosphorus	mg/L	0.058	
HB02	W0436	93-0904	08/14/07	10:44	Total Phosphorus	mg/L	0.060	
HB02	W0436	93-1014	09/18/07	11:11	Total Phosphorus	mg/L	0.034	
HB02	W0436	93-0607	05/01/07	12:15	Suspended Solids	mg/L	6.0	
HB02	W0436	93-0716	06/05/07	11:16	Suspended Solids	mg/L	5.5	
HB02	W0436	93-0818	07/10/07	11:16	Suspended Solids	mg/L	5.2	d
HB02	W0436	93-0904	08/14/07	10:44	Suspended Solids	mg/L	2.2	
HB02	W0436	93-1014	09/18/07	11:11	Suspended Solids	mg/L	3.8	
HB02	W0436	93-0607	05/01/07	12:15	Turbidity	NTU	5.6	
HB02	W0436	93-0716	06/05/07	11:16	Turbidity	NTU	4.0	
HB02	W0436	93-0818	07/10/07	11:16	Turbidity	NTU	6.0	
HB02	W0436	93-0904	08/14/07	10:44	Turbidity	NTU	4.3	
HB02	W0436	93-1014	09/18/07	11:11	Turbidity	NTU	1.3	b
HB02	W0436	93-0607	05/01/07	12:15	True Color	PCU	33	
HB02	W0436	93-0716	06/05/07	11:16	True Color	PCU	<75	j
HB02	W0436	93-0818	07/10/07	11:16	True Color	PCU	30	
HB02	W0436	93-0904	08/14/07	10:44	True Color	PCU	45	
HB02	W0436	93-1014	09/18/07	11:11	True Color	PCU	<15	
HB02	W0436	93-0607	05/01/07	12:15	Apparent Color	PCU	34	
HB02	W0436	93-0716	06/05/07	11:16	Apparent Color	PCU	<75	j
HB02	W0436	93-0818	07/10/07	11:16	Apparent Color	PCU	50	
HB02	W0436	93-0904	08/14/07	10:44	Apparent Color	PCU	65	
HB02	W0436	93-1014	09/18/07	11:11	Apparent Color	PCU	<15	
MR01	W0437	93-0601	05/01/07	9:38	*E. coli*	CFU/100mL	100	j
MR01	W0437	93-0708	06/05/07	9:25	*E. coli*	CFU/100mL	13000	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
MR01	W0437	93-0812	07/10/07	9:50	*E. coli*	CFU/100mL	840	
MR01	W0437	93-0898	08/14/07	9:00	*E. coli*	CFU/100mL	5600	
MR01	W0437	93-0923	08/30/07	9:28	*E. coli*	CFU/100mL	620	
MR01	W0437	93-1006	09/18/07	9:39	*E. coli*	CFU/100mL	220	
MR01	W0437	93-0601	05/01/07	9:38	Ammonia-N	mg/L	0.08	
MR01	W0437	93-0708	06/05/07	9:25	Ammonia-N	mg/L	0.12	
MR01	W0437	93-0812	07/10/07	9:50	Ammonia-N	mg/L	0.33	
MR01	W0437	93-0898	08/14/07	9:00	Ammonia-N	mg/L	0.08	
MR01	W0437	93-1006	09/18/07	9:39	Ammonia-N	mg/L	0.10	
MR01	W0437	93-0601	05/01/07	9:38	Total Nitrogen	mg/L	1.1	
MR01	W0437	93-0708	06/05/07	9:25	Total Nitrogen	mg/L	1.1	
MR01	W0437	93-0812	07/10/07	9:50	Total Nitrogen	mg/L	1.6	
MR01	W0437	93-0898	08/14/07	9:00	Total Nitrogen	mg/L	0.93	
MR01	W0437	93-1006	09/18/07	9:39	Total Nitrogen	mg/L	1.4	
MR01	W0437	93-0601	05/01/07	9:38	Total Phosphorus	mg/L	0.025	
MR01	W0437	93-0708	06/05/07	9:25	Total Phosphorus	mg/L	0.11	
MR01	W0437	93-0812	07/10/07	9:50	Total Phosphorus	mg/L	0.076	
MR01	W0437	93-0898	08/14/07	9:00	Total Phosphorus	mg/L	0.075	
MR01	W0437	93-1006	09/18/07	9:39	Total Phosphorus	mg/L	0.038	
MR01	W0437	93-0601	05/01/07	9:38	Suspended Solids	mg/L	2.5	
MR01	W0437	93-0708	06/05/07	9:25	Suspended Solids	mg/L	13	
MR01	W0437	93-0812	07/10/07	9:50	Suspended Solids	mg/L	19	
MR01	W0437	93-0898	08/14/07	9:00	Suspended Solids	mg/L	4.3	
MR01	W0437	93-1006	09/18/07	9:39	Suspended Solids	mg/L	3.0	
MR01	W0437	93-0601	05/01/07	9:38	Turbidity	NTU	2.2	
MR01	W0437	93-0708	06/05/07	9:25	Turbidity	NTU	8.6	
MR01	W0437	93-0812	07/10/07	9:50	Turbidity	NTU	15.0	
MR01	W0437	93-0898	08/14/07	9:00	Turbidity	NTU	7.4	
MR01	W0437	93-1006	09/18/07	9:39	Turbidity	NTU	8.2	b
MR01	W0437	93-0601	05/01/07	9:38	True Color	PCU	27	
MR01	W0437	93-0708	06/05/07	9:25	True Color	PCU	85	
MR01	W0437	93-0812	07/10/07	9:50	True Color	PCU	60	
MR01	W0437	93-0898	08/14/07	9:00	True Color	PCU	60	
MR01	W0437	93-1006	09/18/07	9:39	True Color	PCU	19	
MR01	W0437	93-0601	05/01/07	9:38	Apparent Color	PCU	36	
MR01	W0437	93-0708	06/05/07	9:25	Apparent Color	PCU	120	
MR01	W0437	93-0812	07/10/07	9:50	Apparent Color	PCU	100	
MR01	W0437	93-0898	08/14/07	9:00	Apparent Color	PCU	130	
MR01	W0437	93-1006	09/18/07	9:39	Apparent Color	PCU	50	
MR01	W0437	93-0601	05/01/07	9:38	Hardness	mg/L	80	
MR01	W0437	93-0812	07/10/07	9:50	Hardness	mg/L	120	
MR01	W0437	93-1006	09/18/07	9:39	Hardness	mg/L	140	
NR01	W0453	93-0614	05/01/07	9:50	*E. coli*	CFU/100mL	710	
NR01	W0453	93-0718	06/05/07	11:54	*E. coli*	CFU/100mL	3900	
NR01	W0453	93-0822	07/10/07	11:58	*E. coli*	CFU/100mL	600	
NR01	W0453	93-0908	08/14/07	11:20	*E. coli*	CFU/100mL	540	
NR01	W0453	93-0933	08/30/07	11:19	*E. coli*	CFU/100mL	2300	
NR01	W0453	93-1016	09/18/07	11:50	*E. coli*	CFU/100mL	610	
NR01	W0453	93-0614	05/01/07	9:50	Ammonia-N	mg/L	0.09	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
NR01	W0453	93-0718	06/05/07	11:54	Ammonia-N	mg/L	0.18	
NR01	W0453	93-0822	07/10/07	11:58	Ammonia-N	mg/L	0.08	
NR01	W0453	93-0908	08/14/07	11:20	Ammonia-N	mg/L	0.08	
NR01	W0453	93-1016	09/18/07	11:50	Ammonia-N	mg/L	0.09	
NR01	W0453	93-0614	05/01/07	9:50	Total Nitrogen	mg/L	1.4	
NR01	W0453	93-0718	06/05/07	11:54	Total Nitrogen	mg/L	1.1	
NR01	W0453	93-0822	07/10/07	11:58	Total Nitrogen	mg/L	1.2	
NR01	W0453	93-0908	08/14/07	11:20	Total Nitrogen	mg/L	1.2	
NR01	W0453	93-1016	09/18/07	11:50	Total Nitrogen	mg/L	1.6	
NR01	W0453	93-0614	05/01/07	9:50	Total Phosphorus	mg/L	0.026	
NR01	W0453	93-0718	06/05/07	11:54	Total Phosphorus	mg/L	0.052	
NR01	W0453	93-0822	07/10/07	11:58	Total Phosphorus	mg/L	0.037	
NR01	W0453	93-0908	08/14/07	11:20	Total Phosphorus	mg/L	0.036	
NR01	W0453	93-1016	09/18/07	11:50	Total Phosphorus	mg/L	0.028	
NR01	W0453	93-0614	05/01/07	9:50	Suspended Solids	mg/L	2.8	
NR01	W0453	93-0718	06/05/07	11:54	Suspended Solids	mg/L	3.0	
NR01	W0453	93-0822	07/10/07	11:58	Suspended Solids	mg/L	1.8	
NR01	W0453	93-0908	08/14/07	11:20	Suspended Solids	mg/L	1.8	
NR01	W0453	93-1016	09/18/07	11:50	Suspended Solids	mg/L	<1.0	
NR01	W0453	93-0614	05/01/07	9:50	Turbidity	NTU	2.5	
NR01	W0453	93-0718	06/05/07	11:54	Turbidity	NTU	2.5	
NR01	W0453	93-0822	07/10/07	11:58	Turbidity	NTU	3.2	
NR01	W0453	93-0908	08/14/07	11:20	Turbidity	NTU	1.5	
NR01	W0453	93-1016	09/18/07	11:50	Turbidity	NTU	1.4	b
NR01	W0453	93-0614	05/01/07	9:50	True Color	PCU	20	
NR01	W0453	93-0718	06/05/07	11:54	True Color	PCU	43	
NR01	W0453	93-0822	07/10/07	11:58	True Color	PCU	23	
NR01	W0453	93-0908	08/14/07	11:20	True Color	PCU	25	
NR01	W0453	93-1016	09/18/07	11:50	True Color	PCU	<15	
NR01	W0453	93-0614	05/01/07	9:50	Apparent Color	PCU	30	
NR01	W0453	93-0718	06/05/07	11:54	Apparent Color	PCU	65	
NR01	W0453	93-0822	07/10/07	11:58	Apparent Color	PCU	30	
NR01	W0453	93-0908	08/14/07	11:20	Apparent Color	PCU	30	
NR01	W0453	93-1016	09/18/07	11:50	Apparent Color	PCU	15	
SB01	W0877	93-0604	05/01/07	10:58	*E. coli*	CFU/100mL	280	j
SB01	W0877	93-0711	06/05/07	10:21	*E. coli*	CFU/100mL	3100	
SB01	W0877	93-0815	07/10/07	10:32	*E. coli*	CFU/100mL	3200	
SB01	W0877	93-0901	08/14/07	9:45	*E. coli*	CFU/100mL	11000	
SB01	W0877	93-0926	08/30/07	10:04	*E. coli*	CFU/100mL	2700	
SB01	W0877	93-1011	09/18/07	10:25	*E. coli*	CFU/100mL	2500	
SB01	W0877	93-0604	05/01/07	10:58	Ammonia-N	mg/L	0.07	
SB01	W0877	93-0711	06/05/07	10:21	Ammonia-N	mg/L	0.13	
SB01	W0877	93-0815	07/10/07	10:32	Ammonia-N	mg/L	0.06	
SB01	W0877	93-0901	08/14/07	9:45	Ammonia-N	mg/L	0.04	
SB01	W0877	93-1011	09/18/07	10:25	Ammonia-N	mg/L	0.04	
SB01	W0877	93-0604	05/01/07	10:58	Total Nitrogen	mg/L	1.8	
SB01	W0877	93-0711	06/05/07	10:21	Total Nitrogen	mg/L	1.7	
SB01	W0877	93-0815	07/10/07	10:32	Total Nitrogen	mg/L	2.0	
SB01	W0877	93-0901	08/14/07	9:45	Total Nitrogen	mg/L	1.9	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
SB01	W0877	93-1011	09/18/07	10:25	Total Nitrogen	mg/L	1.9	
SB01	W0877	93-0604	05/01/07	10:58	Total Phosphorus	mg/L	0.027	
SB01	W0877	93-0711	06/05/07	10:21	Total Phosphorus	mg/L	0.065	
SB01	W0877	93-0815	07/10/07	10:32	Total Phosphorus	mg/L	0.034	
SB01	W0877	93-0901	08/14/07	9:45	Total Phosphorus	mg/L	0.042	
SB01	W0877	93-1011	09/18/07	10:25	Total Phosphorus	mg/L	0.028	
SB01	W0877	93-0604	05/01/07	10:58	Suspended Solids	mg/L	2.7	
SB01	W0877	93-0711	06/05/07	10:21	Suspended Solids	mg/L	4.4	
SB01	W0877	93-0815	07/10/07	10:32	Suspended Solids	mg/L	2.5	
SB01	W0877	93-0901	08/14/07	9:45	Suspended Solids	mg/L	1.2	
SB01	W0877	93-1011	09/18/07	10:25	Suspended Solids	mg/L	<1.0	
SB01	W0877	93-0604	05/01/07	10:58	Turbidity	NTU	3.1	
SB01	W0877	93-0711	06/05/07	10:21	Turbidity	NTU	3.9	
SB01	W0877	93-0815	07/10/07	10:32	Turbidity	NTU	4.8	
SB01	W0877	93-0901	08/14/07	9:45	Turbidity	NTU	3.5	
SB01	W0877	93-1011	09/18/07	10:25	Turbidity	NTU	1.4	b
SB01	W0877	93-0604	05/01/07	10:58	True Color	PCU	23	
SB01	W0877	93-0711	06/05/07	10:21	True Color	PCU	55	
SB01	W0877	93-0815	07/10/07	10:32	True Color	PCU	##	m
SB01	W0877	93-0901	08/14/07	9:45	True Color	PCU	20	
SB01	W0877	93-1011	09/18/07	10:25	True Color	PCU	<15	
SB01	W0877	93-0604	05/01/07	10:58	Apparent Color	PCU	32	
SB01	W0877	93-0711	06/05/07	10:21	Apparent Color	PCU	60	
SB01	W0877	93-0815	07/10/07	10:32	Apparent Color	PCU	##	m
SB01	W0877	93-0901	08/14/07	9:45	Apparent Color	PCU	30	
SB01	W0877	93-1011	09/18/07	10:25	Apparent Color	PCU	<15	
SM03	W0889	93-0622	05/01/07	10:16	*E. coli*	CFU/100mL	5	j
SM03	W0889	93-0726	06/05/07	11:05	*E. coli*	CFU/100mL	540	
SM03	W0889	93-0830	07/10/07	11:35	*E. coli*	CFU/100mL	400	
SM03	W0889	93-0916	08/14/07	10:11	*E. coli*	CFU/100mL	200	
SM03	W0889	93-0941	08/30/07	10:31	*E. coli*	CFU/100mL	210	
SM03	W0889	93-1026	09/18/07	11:55	*E. coli*	CFU/100mL	90	
SM03	W0889	93-0622	05/01/07	10:16	Ammonia-N	mg/L	0.02	
SM03	W0889	93-0726	06/05/07	11:05	Ammonia-N	mg/L	0.02	
SM03	W0889	93-0830	07/10/07	11:35	Ammonia-N	mg/L	0.04	
SM03	W0889	93-0916	08/14/07	10:11	Ammonia-N	mg/L	##	d
SM03	W0889	93-1026	09/18/07	11:55	Ammonia-N	mg/L	0.03	
SM03	W0889	93-0622	05/01/07	10:16	Total Nitrogen	mg/L	0.46	
SM03	W0889	93-0726	06/05/07	11:05	Total Nitrogen	mg/L	0.61	
SM03	W0889	93-0830	07/10/07	11:35	Total Nitrogen	mg/L	0.99	
SM03	W0889	93-0916	08/14/07	10:11	Total Nitrogen	mg/L	1.8	
SM03	W0889	93-1026	09/18/07	11:55	Total Nitrogen	mg/L	1.0	
SM03	W0889	93-0622	05/01/07	10:16	Total Phosphorus	mg/L	0.011	
SM03	W0889	93-0726	06/05/07	11:05	Total Phosphorus	mg/L	0.028	
SM03	W0889	93-0830	07/10/07	11:35	Total Phosphorus	mg/L	0.041	d
SM03	W0889	93-0916	08/14/07	10:11	Total Phosphorus	mg/L	0.022	
SM03	W0889	93-1026	09/18/07	11:55	Total Phosphorus	mg/L	0.035	
SM03	W0889	93-0622	05/01/07	10:16	Suspended Solids	mg/L	2.2	
SM03	W0889	93-0726	06/05/07	11:05	Suspended Solids	mg/L	3.8	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
SM03	W0889	93-0830	07/10/07	11:35	Suspended Solids	mg/L	2.8	
SM03	W0889	93-0916	08/14/07	10:11	Suspended Solids	mg/L	3.5	
SM03	W0889	93-1026	09/18/07	11:55	Suspended Solids	mg/L	3.5	
SM03	W0889	93-0622	05/01/07	10:16	Turbidity	NTU	2.6	
SM03	W0889	93-0726	06/05/07	11:05	Turbidity	NTU	3.7	
SM03	W0889	93-0830	07/10/07	11:35	Turbidity	NTU	7.0	
SM03	W0889	93-0916	08/14/07	10:11	Turbidity	NTU	4.8	
SM03	W0889	93-1026	09/18/07	11:55	Turbidity	NTU	6.4	
SM03	W0889	93-0622	05/01/07	10:16	True Color	PCU	50	
SM03	W0889	93-0726	06/05/07	11:05	True Color	PCU	130	
SM03	W0889	93-0830	07/10/07	11:35	True Color	PCU	##	d
SM03	W0889	93-0916	08/14/07	10:11	True Color	PCU	17	
SM03	W0889	93-1026	09/18/07	11:55	True Color	PCU	<15	
SM03	W0889	93-0622	05/01/07	10:16	Apparent Color	PCU	70	
SM03	W0889	93-0726	06/05/07	11:05	Apparent Color	PCU	160	
SM03	W0889	93-0830	07/10/07	11:35	Apparent Color	PCU	100	d
SM03	W0889	93-0916	08/14/07	10:11	Apparent Color	PCU	40	
SM03	W0889	93-1026	09/18/07	11:55	Apparent Color	PCU	29	
SR01B	W0883	93-0603	05/01/07	10:28	*E. coli*	CFU/100mL	67	j
SR01B	W0883	93-0710	06/05/07	10:03	*E. coli*	CFU/100mL	9100	
SR01B	W0883	93-0814	07/10/07	10:22	*E. coli*	CFU/100mL	700	
SR01B	W0883	93-0900	08/14/07	9:32	*E. coli*	CFU/100mL	4700	
SR01B	W0883	93-0925	08/30/07	9:54	*E. coli*	CFU/100mL	220	
SR01B	W0883	93-1010	09/18/07	10:12	*E. coli*	CFU/100mL	180	
SR01B	W0883	93-0603	05/01/07	10:28	Ammonia-N	mg/L	<0.02	
SR01B	W0883	93-0710	06/05/07	10:03	Ammonia-N	mg/L	0.09	
SR01B	W0883	93-0814	07/10/07	10:22	Ammonia-N	mg/L	0.04	
SR01B	W0883	93-0900	08/14/07	9:32	Ammonia-N	mg/L	0.03	
SR01B	W0883	93-1010	09/18/07	10:12	Ammonia-N	mg/L	0.03	
SR01B	W0883	93-0603	05/01/07	10:28	Total Nitrogen	mg/L	0.85	
SR01B	W0883	93-0710	06/05/07	10:03	Total Nitrogen	mg/L	1.0	
SR01B	W0883	93-0814	07/10/07	10:22	Total Nitrogen	mg/L	0.98	
SR01B	W0883	93-0900	08/14/07	9:32	Total Nitrogen	mg/L	0.97	
SR01B	W0883	93-1010	09/18/07	10:12	Total Nitrogen	mg/L	1.0	
SR01B	W0883	93-0603	05/01/07	10:28	Total Phosphorus	mg/L	0.023	
SR01B	W0883	93-0710	06/05/07	10:03	Total Phosphorus	mg/L	0.080	
SR01B	W0883	93-0814	07/10/07	10:22	Total Phosphorus	mg/L	0.053	
SR01B	W0883	93-0900	08/14/07	9:32	Total Phosphorus	mg/L	0.064	
SR01B	W0883	93-1010	09/18/07	10:12	Total Phosphorus	mg/L	0.021	
SR01B	W0883	93-0603	05/01/07	10:28	Suspended Solids	mg/L	2.8	
SR01B	W0883	93-0710	06/05/07	10:03	Suspended Solids	mg/L	8.5	
SR01B	W0883	93-0814	07/10/07	10:22	Suspended Solids	mg/L	3.4	
SR01B	W0883	93-0900	08/14/07	9:32	Suspended Solids	mg/L	7.7	
SR01B	W0883	93-1010	09/18/07	10:12	Suspended Solids	mg/L	<1.0	
SR01B	W0883	93-0603	05/01/07	10:28	Turbidity	NTU	2.3	
SR01B	W0883	93-0710	06/05/07	10:03	Turbidity	NTU	6.3	
SR01B	W0883	93-0814	07/10/07	10:22	Turbidity	NTU	5.9	
SR01B	W0883	93-0900	08/14/07	9:32	Turbidity	NTU	7.1	
SR01B	W0883	93-1010	09/18/07	10:12	Turbidity	NTU	2.5	b

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
SR01B	W0883	93-0603	05/01/07	10:28	True Color	PCU	40	
SR01B	W0883	93-0710	06/05/07	10:03	True Color	PCU	<75	j
SR01B	W0883	93-0814	07/10/07	10:22	True Color	PCU	45	
SR01B	W0883	93-0900	08/14/07	9:32	True Color	PCU	35	
SR01B	W0883	93-1010	09/18/07	10:12	True Color	PCU	15	
SR01B	W0883	93-0603	05/01/07	10:28	Apparent Color	PCU	45	
SR01B	W0883	93-0710	06/05/07	10:03	Apparent Color	PCU	<75	j
SR01B	W0883	93-0814	07/10/07	10:22	Apparent Color	PCU	60	
SR01B	W0883	93-0900	08/14/07	9:32	Apparent Color	PCU	60	
SR01B	W0883	93-1010	09/18/07	10:12	Apparent Color	PCU	20	
SR01B	W0883	93-0603	05/01/07	10:28	Hardness	mg/L	79	
SR01B	W0883	93-0814	07/10/07	10:22	Hardness	mg/L	80	
SR01B	W0883	93-1010	09/18/07	10:12	Hardness	mg/L	100	
SR04A	W0882	93-0600	05/01/07	9:07	*E. coli*	CFU/100mL	67	j
SR04A	W0882	93-0706	06/05/07	8:50	*E. coli*	CFU/100mL	11000	
SR04A	W0882	93-0810	07/10/07	9:16	*E. coli*	CFU/100mL	1100	
SR04A	W0882	93-0896	08/14/07	8:28	*E. coli*	CFU/100mL	6300	
SR04A	W0882	93-0921	08/30/07	8:53	*E. coli*	CFU/100mL	81	
SR04A	W0882	93-1004	09/18/07	9:06	*E. coli*	CFU/100mL	280	
SR04A	W0882	93-0600	05/01/07	9:07	Ammonia-N	mg/L	0.13	
SR04A	W0882	93-0706	06/05/07	8:50	Ammonia-N	mg/L	0.10	
SR04A	W0882	93-0810	07/10/07	9:16	Ammonia-N	mg/L	0.13	
SR04A	W0882	93-0896	08/14/07	8:28	Ammonia-N	mg/L	0.09	
SR04A	W0882	93-1004	09/18/07	9:06	Ammonia-N	mg/L	0.17	
SR04A	W0882	93-0600	05/01/07	9:07	Total Nitrogen	mg/L	1.5	
SR04A	W0882	93-0706	06/05/07	8:50	Total Nitrogen	mg/L	1.3	
SR04A	W0882	93-0810	07/10/07	9:16	Total Nitrogen	mg/L	1.1	
SR04A	W0882	93-0896	08/14/07	8:28	Total Nitrogen	mg/L	0.94	
SR04A	W0882	93-1004	09/18/07	9:06	Total Nitrogen	mg/L	1.1	
SR04A	W0882	93-0600	05/01/07	9:07	Total Phosphorus	mg/L	0.034	
SR04A	W0882	93-0706	06/05/07	8:50	Total Phosphorus	mg/L	0.11	
SR04A	W0882	93-0810	07/10/07	9:16	Total Phosphorus	mg/L	0.081	
SR04A	W0882	93-0896	08/14/07	8:28	Total Phosphorus	mg/L	0.10	
SR04A	W0882	93-1004	09/18/07	9:06	Total Phosphorus	mg/L	0.067	
SR04A	W0882	93-0600	05/01/07	9:07	Suspended Solids	mg/L	5.1	
SR04A	W0882	93-0706	06/05/07	8:50	Suspended Solids	mg/L	12	
SR04A	W0882	93-0810	07/10/07	9:16	Suspended Solids	mg/L	6.2	
SR04A	W0882	93-0896	08/14/07	8:28	Suspended Solids	mg/L	8.2	
SR04A	W0882	93-1004	09/18/07	9:06	Suspended Solids	mg/L	7.2	
SR04A	W0882	93-0600	05/01/07	9:07	Turbidity	NTU	6.0	
SR04A	W0882	93-0706	06/05/07	8:50	Turbidity	NTU	10.5	
SR04A	W0882	93-0810	07/10/07	9:16	Turbidity	NTU	12.5	
SR04A	W0882	93-0896	08/14/07	8:28	Turbidity	NTU	11.0	
SR04A	W0882	93-1004	09/18/07	9:06	Turbidity	NTU	14.5	b
SR04A	W0882	93-0600	05/01/07	9:07	True Color	PCU	70	
SR04A	W0882	93-0706	06/05/07	8:50	True Color	PCU	160	
SR04A	W0882	93-0810	07/10/07	9:16	True Color	PCU	100	
SR04A	W0882	93-0896	08/14/07	8:28	True Color	PCU	100	
SR04A	W0882	93-1004	09/18/07	9:06	True Color	PCU	20	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
SR04A	W0882	93-0600	05/01/07	9:07	Apparent Color	PCU	75	
SR04A	W0882	93-0706	06/05/07	8:50	Apparent Color	PCU	200	
SR04A	W0882	93-0810	07/10/07	9:16	Apparent Color	PCU	150	
SR04A	W0882	93-0896	08/14/07	8:28	Apparent Color	PCU	140	
SR04A	W0882	93-1004	09/18/07	9:06	Apparent Color	PCU	65	
SR04A	W0882	93-0600	05/01/07	9:07	Hardness	mg/L	71	
SR04A	W0882	93-0810	07/10/07	9:16	Hardness	mg/L	72	
SR04A	W0882	93-1004	09/18/07	9:06	Hardness	mg/L	120	
SR05	W1545	93-0602	05/01/07	10:02	*E. coli*	CFU/100mL	38	j
SR05	W1545	93-0709	06/05/07	9:48	*E. coli*	CFU/100mL	9500	
SR05	W1545	93-0813	07/10/07	10:03	*E. coli*	CFU/100mL	620	
SR05	W1545	93-0899	08/14/07	9:10	*E. coli*	CFU/100mL	5200	
SR05	W1545	93-0924	08/30/07	9:42	*E. coli*	CFU/100mL	200	
SR05	W1545	93-1007	09/18/07	9:52	*E. coli*	CFU/100mL	290	
SR05	W1545	93-0602	05/01/07	10:02	Ammonia-N	mg/L	0.03	
SR05	W1545	93-0709	06/05/07	9:48	Ammonia-N	mg/L	0.12	
SR05	W1545	93-0813	07/10/07	10:03	Ammonia-N	mg/L	0.06	
SR05	W1545	93-0899	08/14/07	9:10	Ammonia-N	mg/L	0.03	
SR05	W1545	93-1007	09/18/07	9:52	Ammonia-N	mg/L	0.02	
SR05	W1545	93-0602	05/01/07	10:02	Total Nitrogen	mg/L	0.83	
SR05	W1545	93-0709	06/05/07	9:48	Total Nitrogen	mg/L	1.1	
SR05	W1545	93-0813	07/10/07	10:03	Total Nitrogen	mg/L	1.1	
SR05	W1545	93-0899	08/14/07	9:10	Total Nitrogen	mg/L	0.82	
SR05	W1545	93-1007	09/18/07	9:52	Total Nitrogen	mg/L	1.2	
SR05	W1545	93-0602	05/01/07	10:02	Total Phosphorus	mg/L	0.027	
SR05	W1545	93-0709	06/05/07	9:48	Total Phosphorus	mg/L	0.082	
SR05	W1545	93-0813	07/10/07	10:03	Total Phosphorus	mg/L	0.055	
SR05	W1545	93-0899	08/14/07	9:10	Total Phosphorus	mg/L	0.063	
SR05	W1545	93-1007	09/18/07	9:52	Total Phosphorus	mg/L	0.029	
SR05	W1545	93-0602	05/01/07	10:02	Suspended Solids	mg/L	3.1	
SR05	W1545	93-0709	06/05/07	9:48	Suspended Solids	mg/L	4.6	
SR05	W1545	93-0813	07/10/07	10:03	Suspended Solids	mg/L	2.0	
SR05	W1545	93-0899	08/14/07	9:10	Suspended Solids	mg/L	3.3	
SR05	W1545	93-1007	09/18/07	9:52	Suspended Solids	mg/L	1.3	
SR05	W1545	93-0602	05/01/07	10:02	Turbidity	NTU	2.3	
SR05	W1545	93-0709	06/05/07	9:48	Turbidity	NTU	4.7	
SR05	W1545	93-0813	07/10/07	10:03	Turbidity	NTU	6.4	
SR05	W1545	93-0899	08/14/07	9:10	Turbidity	NTU	5.6	
SR05	W1545	93-1007	09/18/07	9:52	Turbidity	NTU	3.9	b
SR05	W1545	93-0602	05/01/07	10:02	True Color	PCU	36	
SR05	W1545	93-0709	06/05/07	9:48	True Color	PCU	<75	j
SR05	W1545	93-0813	07/10/07	10:03	True Color	PCU	60	
SR05	W1545	93-0899	08/14/07	9:10	True Color	PCU	50	
SR05	W1545	93-1007	09/18/07	9:52	True Color	PCU	20	
SR05	W1545	93-0602	05/01/07	10:02	Apparent Color	PCU	43	
SR05	W1545	93-0709	06/05/07	9:48	Apparent Color	PCU	95	
SR05	W1545	93-0813	07/10/07	10:03	Apparent Color	PCU	65	
SR05	W1545	93-0899	08/14/07	9:10	Apparent Color	PCU	70	
SR05	W1545	93-1007	09/18/07	9:52	Apparent Color	PCU	29	

Table 5. 2007 MassDEP DWM North Shore Coastal Watersheds water quality data.

Station ID	Unique ID	OWMID	Date	Time	Analyte	Units	Result	Data Qualifiers
SX01	W1544	93-0626	05/01/07	11:46	*E. coli*	CFU/100mL	140	j
SX01	W1544	93-0730	06/05/07	12:25	*E. coli*	CFU/100mL	2200	
SX01	W1544	93-0834	07/10/07	12:55	*E. coli*	CFU/100mL	2100	
SX01	W1544	93-0920	08/14/07	12:15	*E. coli*	CFU/100mL	150	
SX01	W1544	93-0945	08/30/07	11:36	*E. coli*	CFU/100mL	48	
SX01	W1544	93-1028	09/18/07	13:15	*E. coli*	CFU/100mL	350	
SX01	W1544	93-0626	05/01/07	11:46	Enterococci	CFU/100mL	140	
SX01	W1544	93-0730	06/05/07	12:25	Enterococci	CFU/100mL	>20000	
SX01	W1544	93-0626	05/01/07	11:46	Ammonia-N	mg/L	0.05	
SX01	W1544	93-0730	06/05/07	12:25	Ammonia-N	mg/L	0.06	
SX01	W1544	93-0834	07/10/07	12:55	Ammonia-N	mg/L	0.04	
SX01	W1544	93-0920	08/14/07	12:15	Ammonia-N	mg/L	<0.02	d
SX01	W1544	93-1028	09/18/07	13:15	Ammonia-N	mg/L	0.02	
SX01	W1544	93-0626	05/01/07	11:46	Total Nitrogen	mg/L	0.85	
SX01	W1544	93-0730	06/05/07	12:25	Total Nitrogen	mg/L	0.87	
SX01	W1544	93-0834	07/10/07	12:55	Total Nitrogen	mg/L	0.90	
SX01	W1544	93-0920	08/14/07	12:15	Total Nitrogen	mg/L	1.0	
SX01	W1544	93-1028	09/18/07	13:15	Total Nitrogen	mg/L	1.1	
SX01	W1544	93-0626	05/01/07	11:46	Total Phosphorus	mg/L	0.026	
SX01	W1544	93-0730	06/05/07	12:25	Total Phosphorus	mg/L	0.060	
SX01	W1544	93-0834	07/10/07	12:55	Total Phosphorus	mg/L	0.027	
SX01	W1544	93-0920	08/14/07	12:15	Total Phosphorus	mg/L	0.018	
SX01	W1544	93-1028	09/18/07	13:15	Total Phosphorus	mg/L	0.011	
SX01	W1544	93-0626	05/01/07	11:46	Suspended Solids	mg/L	7.1	
SX01	W1544	93-0730	06/05/07	12:25	Suspended Solids	mg/L	11	
SX01	W1544	93-0834	07/10/07	12:55	Suspended Solids	mg/L	<1.0	
SX01	W1544	93-0920	08/14/07	12:15	Suspended Solids	mg/L	<1.0	
SX01	W1544	93-1028	09/18/07	13:15	Suspended Solids	mg/L	<1.0	
SX01	W1544	93-0626	05/01/07	11:46	Turbidity	NTU	8.2	
SX01	W1544	93-0730	06/05/07	12:25	Turbidity	NTU	21.5	
SX01	W1544	93-0834	07/10/07	12:55	Turbidity	NTU	6.9	
SX01	W1544	93-0920	08/14/07	12:15	Turbidity	NTU	3.0	
SX01	W1544	93-1028	09/18/07	13:15	Turbidity	NTU	2.3	
SX01	W1544	93-0626	05/01/07	11:46	True Color	PCU	32	
SX01	W1544	93-0730	06/05/07	12:25	True Color	PCU	<75	j
SX01	W1544	93-0834	07/10/07	12:55	True Color	PCU	55	d
SX01	W1544	93-0920	08/14/07	12:15	True Color	PCU	30	
SX01	W1544	93-1028	09/18/07	13:15	True Color	PCU	<15	
SX01	W1544	93-0626	05/01/07	11:46	Apparent Color	PCU	55	
SX01	W1544	93-0730	06/05/07	12:25	Apparent Color	PCU	95	
SX01	W1544	93-0834	07/10/07	12:55	Apparent Color	PCU	70	
SX01	W1544	93-0920	08/14/07	12:15	Apparent Color	PCU	44	
SX01	W1544	93-1028	09/18/07	13:15	Apparent Color	PCU	20	

Table 6. Geometric mean* of the 2007 *E. coli* results for each DWM river sampling station.

Station ID	Unique ID	Sample Count	Geometric Mean (CFU/100 ml)
AL02	W1546	6	125
BB01	W1541	6	822
BB01A	W0448	6	682
BP01	W0878	6	1255
CB01	W0888	4	170
CC01	W1542	6	451
CR01	W0452	6	439
CR02	W0451	6	468
CT01	W1543	5	168
FF02	W1540	6	531
GB01	W0454	6	151
HB01	W0435	6	335
HB02	W0436	6	937
MR01	W0437	6	970
NR01	W0453	6	1039
SB01	W0877	6	2431
SM03	W0889	6	126
SR01B	W0883	6	656
SR04A	W0882	6	698
SR05	W1545	6	638
SX01	W1544	6	343

*The detection limit was used in the geometric mean calculation if the result was below the detection limit. Results from duplicate samples were removed before completing the geometric mean calculation.

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
AL02	W1546	93-0646	05/01/07	10:50	F	0.2		11.7		6.6		187		122		11.0		102	
AL02	W1546	93-0683	06/01/07	13:09	F	0.2		19.9		6.5		188		121		8.0		88	
AL02	W1546	93-0704	06/06/07	12:19	F	0.2		18.6		6.2		153		98		6.2	i	67	i
AL02	W1546	93-0787	07/06/07	12:54	F	0.2		20.9		6.6		161		103		7.3		83	
AL02	W1546	93-0808	07/11/07	12:59	F	0.1		21.5		6.9		224		143		7.7		89	
AL02	W1546	93-0873	08/10/07	13:01	F	0.2		18.2		6.7		281		180		7.3		79	
AL02	W1546	93-0894	08/15/07	12:02	F	0.2		18.6		6.6		289		185		6.9		75	
AL02	W1546	93-0981	09/17/07	12:10	F	0.1		12.4		6.6		331		212		6.8		64	
AL02	W1546	93-1002	09/19/07	11:48	F	0.1		12.3		6.6		335		215		7.1		66	
BB01	W1541	93-0640	05/01/07	11:00	F	0.0		12.5		7.3		762		495		12.1		114	
BB01	W1541	93-0677	06/01/07	10:26	F	0.3		16.8		7.0		848		543		8.8		92	
BB01	W1541	93-0698	06/06/07	9:56	F	0.5		16.6		6.9		484		310		6.9	i	73	i
BB01	W1541	93-0781	07/06/07	9:57	F	0.3		18.1		6.7		794	c	508	c	5.9		64	
BB01	W1541	93-0802	07/11/07	10:31	F	0.3		19.5	u	7.0		771	c	493	c	7.5		84	
BB01	W1541	93-0867	08/10/07	10:27	F	0.3		17.9		6.8		818	c	523	c	6.7		72	
BB01	W1541	93-0888	08/15/07	9:44	F	0.3		16.5	u	6.6		839	c	537	c	5.6		58	
BB01	W1541	93-0975	09/17/07	9:52	S	0.2		11.3		6.6		915	c	586	c	5.7		52	
BB01	W1541	93-0996	09/19/07	10:01	S	0.3		11.5		6.6		953	c	610	c	5.5		51	
BB01A	W0448	93-0635	05/01/07	8:52	F	0.2		8.5		6.9		396		257		9.4		80	
BB01A	W0448	93-0665	06/01/07	10:26	F	0.5		14.6		7.0		465		297		7.3		73	
BB01A	W0448	93-0686	06/06/07	9:25	F	0.7		14.5		6.8		323		207		5.4		54	
BB01A	W0448	93-0737	06/29/07	9:39	F	--		18.2	s	--		--		--		--		--	
BB01A	W0448	93-0769	07/06/07	9:29	F	0.4		18.2		7.0		462		296		4.2	u	45	u
BB01A	W0448	93-0790	07/11/07	9:13	F	0.4		17.1		7.1		580	i	371	i	##	i	##	i
BB01A	W0448	93-0855	08/10/07	9:26	F	0.4		16.2		7.1		629		402		4.3		44	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
BB01A	W0448	93-0876	08/15/07	9:09	F	0.3		15.0		7.1		616		394		4.4		44	
BB01A	W0448	93-0963	09/17/07	9:24	F	0.3		8.7		7.1		588		376		6.4		55	
BB01A	W0448	93-0984	09/19/07	9:57	F	0.3		9.5		7.2		590		378		6.9		61	
BB01A	W0448	93-0743	10/05/07	14:47	F	--		13.5	s	--		--		--		--		--	
BP01	W0878	93-0632	05/01/07	11:33	F	0.2		11.8		7.1		598		383		11.5		107	
BP01	W0878	93-0670	06/01/07	13:36	F	0.2		17.7		6.9		636		407		9.5		101	
BP01	W0878	93-0691	06/06/07	11:19	**	0.2		14.9		7.0		514		329		8.6		87	
BP01	W0878	93-0739	06/29/07	10:45	F	--		18.4	s	--		--		--		--		--	
BP01	W0878	93-0774	07/06/07	11:58	F	0.1		21.4		6.9		475		304		8.4		97	
BP01	W0878	93-0795	07/11/07	11:04	F	0.1		19.4		7.1		604	i	386	i	##	i	##	i
BP01	W0878	93-0860	08/10/07	11:29	F	0.1		16.9		6.9		593		379		9.4		98	
BP01	W0878	93-0881	08/15/07	11:18	F	0.1		19.9		7.2		612		392		10.0		111	
BP01	W0878	93-0968	09/17/07	11:19	F	0.2		14.8		7.2		621		398		10.3		103	
BP01	W0878	93-0989	09/19/07	11:59	F	0.2		16.0		7.3		610		391		10.3		105	
BP01	W0878	93-0745	10/05/07	11:42	F	--		19.1	s	--		--		--		--		--	
CB01	W0888	93-0644	05/01/07	10:01	F	0.3		11.5		6.6		270		176		12.1		111	
CB01	W0888	93-0681	06/01/07	12:18	S	0.1		21.9		6.5		259		166		6.2		72	
CB01	W0888	93-0702	06/06/07	11:37	S	0.2		18.3		6.3		211		135		7.3	i	80	i
CB01	W0888	93-0785	07/06/07	12:09	F	0.2		22.6		6.4		259		166		3.8		45	
CB01	W0888	93-0806	07/11/07	12:35	S	0.1		21.0		6.4		284		182		2.3		26	
CB01	W0888	93-0871	08/10/07	**	S	**		**		**		**		**		**		**	
CB01	W0888	93-0892	08/15/07	**	S	**		**		**		**		**		**		**	
CB01	W0888	93-0979	09/17/07	11:26	S	0.0	i	13.4		5.8		469		300		3.9		38	
CB01	W0888	93-1000	09/19/07	11:15	S	0.0	i	13.1		6.0		491		314		5.3		51	
CC01	W1542	93-0643	05/01/07	9:26	F	0.1		9.3		6.5		256		166		11.4		99	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
CC01	W1542	93-0680	06/01/07	11:52	F	0.2		15.4		6.6		328		210		8.6		87	
CC01	W1542	93-0701	06/06/07	11:12	F	0.1		14.7		6.4		232		149		8.2	i	83	i
CC01	W1542	93-0784	07/06/07	11:23	F	0.1		18.6		6.8		420		269		8.0		87	
CC01	W1542	93-0805	07/11/07	11:48	F	0.2		17.2		6.8		473		303		8.2		87	
CC01	W1542	93-0870	08/10/07	11:44	F	0.2		15.6		6.7		538		344		8.3		85	
CC01	W1542	93-0891	08/15/07	10:55	F	0.2		16.3		6.7		533		341		8.5		88	
CC01	W1542	93-0978	09/17/07	11:02	F	0.1		12.3		6.8		432		278		9.5		89	
CC01	W1542	93-0999	09/19/07	10:55	F	0.1		12.1		6.8		548		350		9.7		91	
CR01	W0452	93-0638	05/01/07	10:26	F	0.2		11.4		7.4		777		505		11.8		108	
CR01	W0452	93-0675	06/01/07	9:46	F	0.3		16.7		7.1		901		577		8.2		86	
CR01	W0452	93-0696	06/06/07	9:23	F	0.4		17.2		6.9		512		328		7.3	i	77	i
CR01	W0452	93-0779	07/06/07	9:09	F	0.3		20.9		7.2		735	c	470	c	7.0		80	
CR01	W0452	93-0800	07/11/07	9:47	F	0.2		21.3		7.4		792	c	507	c	7.4		85	
CR01	W0452	93-0865	08/10/07	9:22	F	0.3		20.1		7.2		798	c	511	c	6.5		73	
CR01	W0452	93-0886	08/15/07	9:00	F	0.2		19.0		7.1		773	c	495	c	6.9		76	
CR01	W0452	93-0973	09/17/07	9:15	F	0.2		13.1		7.1		747	c	479	c	8.3		80	
CR01	W0452	93-0994	09/19/07	9:32	F	0.2		12.8		7.2		829	c	530	c	8.3		79	
CR02	W0451	93-0639	05/01/07	10:41	F	0.1		10.4		7.4		744		484		11.6		104	
CR02	W0451	93-0676	06/01/07	10:06	F	0.2		15.3		7.1		892		571		6.5		67	
CR02	W0451	93-0697	06/06/07	9:40	F	0.1		15.1		7.0		649		416		6.4	i	65	i
CR02	W0451	93-0780	07/06/07	9:33	F	0.3		19.4		7.1		767	c	491	c	5.7		63	
CR02	W0451	93-0801	07/11/07	10:09	F	0.3		18.4		7.2		870	c	557	c	5.9		64	
CR02	W0451	93-0866	08/10/07	9:46	F	0.4		17.7		7.0		883	c	565	c	6.2		66	
CR02	W0451	93-0887	08/15/07	9:22	F	0.2		17.2		7.0		860	c	550	c	6.4		68	
CR02	W0451	93-0974	09/17/07	9:31	F	0.0	i	12.7		7.1		847	c	542	c	7.2		68	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
CR02	W0451	93-0995	09/19/07	9:45	F	0.1		12.3		7.1		927	c	593	c	7.4		69	
CT01	W1543	93-0642	05/01/07	9:00	F	0.1		8.7		6.3		454		295		10.2		88	
CT01	W1543	93-0679	06/01/07	11:27	F	0.1		14.9		6.7		481		308		7.1		71	
CT01	W1543	93-0700	06/06/07	10:44	F	0.1		15.0		6.5		379		243		7.1	i	72	i
CT01	W1543	93-0783	07/06/07	10:50	F	0.2		18.3		6.6		486		311		6.1		66	
CT01	W1543	93-0804	07/11/07	11:21	F	0.2		##	u	6.3	i	395	u, i	253	u, i	5.0	i	51	i
CT01	W1543	93-0869	08/10/07	**	NW	^^		^^		^^		^^		^^		^^		^^	
CT01	W1543	93-0890	08/15/07	**	NW	^^		^^		^^		^^		^^		^^		^^	
CT01	W1543	93-0977	09/17/07	10:39	F	0.1		14.3		6.3		321		205		3.7		36	
CT01	W1543	93-0998	09/19/07	10:36	F	0.1		14.0		6.3		320		205		4.1		40	
FF02	W1540	93-0641	05/01/07	11:23	F	0.2		10.6		7.6		498		324		13.1		118	
FF02	W1540	93-0678	06/01/07	10:48	F	0.1		14.5		7.3		539		345		8.8		87	
FF02	W1540	93-0699	06/06/07	10:17	F	0.1		14.5		7.1		419		268		8.5	i	86	i
FF02	W1540	93-0782	07/06/07	10:17	F	0.2		19.5		7.3		487		312		7.8		87	
FF02	W1540	93-0803	07/11/07	10:54	F	0.2		18.1		7.4		546		350		8.1		87	
FF02	W1540	93-0868	08/10/07	10:55	F	0.3		17.4		7.3		527		337		8.2		87	
FF02	W1540	93-0889	08/15/07	10:10	F	0.2		17.4		7.3		506		324		8.3		89	
FF02	W1540	93-0976	09/17/07	10:14	F	0.2		11.8		7.2		525		336		9.4		87	
FF02	W1540	93-0997	09/19/07	10:16	F	0.1		11.4		7.3		593		380		9.5		87	
GB01	W0454	93-0636	05/01/07	9:31	F	0.4		11.8		7.2		707		460		11.8		109	
GB01	W0454	93-0673	06/01/07	15:10	F	0.2		23.4		7.6		605		387		9.0		107	
GB01	W0454	93-0694	06/06/07	12:30	F	0.3		18.8		7.4		671		430		8.9		98	
GB01	W0454	93-0742	06/29/07	11:47	F	--		19.4	s	--		--		--		--		--	
GB01	W0454	93-0777	07/06/07	13:51	F	0.1		24.7		7.4		780	c	499	c	7.1		87	
GB01	W0454	93-0798	07/11/07	12:38	F	0.1		25.0		7.4		836	i, c	535	i, c	##	i	##	i

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
GB01	W0454	93-0863	08/10/07	13:06	F	0.1		19.6		7.1		433		277		7.3		81	
GB01	W0454	93-0884	08/15/07	12:46	F	0.1		20.1		6.9		816	c	522	c	6.3		71	
GB01	W0454	93-0971	09/17/07	12:37	F	0.1		14.3		6.8		720	c	461	c	4.1		41	
GB01	W0454	93-0992	09/19/07	13:29	F	0.1		14.5	u	6.7		706		452		4.4	u	43	u
GB01	W0454	93-0748	10/05/07	12:17	F	--		20.3	s	--		--		--		--		--	
HB01	W0435	93-0633	05/01/07	12:02	F	0.2		13.6		6.9		699		447		9.4		92	
HB01	W0435	93-0671	06/01/07	14:02	S	0.4		15.5	u	6.5		835	u	534	u	4.5	u	45	u
HB01	W0435	93-0692	06/06/07	11:40	S	##	i	13.8		6.8		677		433		5.6		55	
HB01	W0435	93-0775	07/06/07	12:29	S	0.3		18.4		6.8		732	c	468	c	4.7	u	51	u
HB01	W0435	93-0796	07/11/07	11:45	S	0.3		16.4		6.7		883	u, i, c	565	u, i, c	##	i	##	i
HB01	W0435	93-0861	08/10/07	12:01	F	0.3		16.4		7.0		778	c	498	c	5.8		60	
HB01	W0435	93-0882	08/15/07	11:50	F	0.3		16.7		6.9		794	c	508	c	5.5		58	
HB01	W0435	93-0969	09/17/07	11:37	F	0.2		12.3		7.1		761	c	487	c	7.9		75	
HB01	W0435	93-0990	09/19/07	12:19	F	0.0	i	12.9		7.2		758	c	485	c	7.8		74	
HB02	W0436	93-0634	05/01/07	12:25	F	0.2		12.5		7.1		465		298		10.7		102	
HB02	W0436	93-0672	06/01/07	14:29	F	0.2		17.7		7.0		541		346		7.8		83	
HB02	W0436	93-0693	06/06/07	12:01	F	0.1		15.0		7.0		405		259		8.3		84	
HB02	W0436	93-0740	06/29/07	11:06	F	--		18.8	s	--		--		--		--		--	
HB02	W0436	93-0776	07/06/07	13:19	F	0.1		20.4		7.1		429		274		7.0		79	
HB02	W0436	93-0797	07/11/07	12:10	F	0.1		19.5		7.3		638	i	408	i	##	i	##	i
HB02	W0436	93-0862	08/10/07	12:37	F	0.1		17.2		7.2		643		411		7.7		81	
HB02	W0436	93-0883	08/15/07	12:15	F	0.1		18.5		7.2		642		411		7.8		84	
HB02	W0436	93-0970	09/17/07	11:56	F	0.1		13.2		7.2		871	c	557	c	9.2		88	
HB02	W0436	93-0991	09/19/07	12:57	F	0.0	i	13.7		7.2		961	c	615	c	9.0		88	
HB02	W0436	93-0746	10/05/07	12:00	F	--		16.2	s	--		--		--		--		--	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
MR01	W0437	93-0628	05/01/07	9:46	F	0.5		11.0		6.9		615		394		9.4		87	
MR01	W0437	93-0666	06/01/07	11:01	F	0.2		18.4		6.7		764		489		6.0		65	
MR01	W0437	93-0687	06/06/07	9:55	F	0.6		16.4		6.8		522		334		5.9		61	
MR01	W0437	93-0770	07/06/07	9:57	F	0.1		20.5		6.7		666		426		4.5		51	
MR01	W0437	93-0791	07/11/07	9:37	F	0.0	i	19.3		6.9		847	i, c	542	i, c	##	i	##	i
MR01	W0437	93-0856	08/10/07	9:55	F	0.2		18.5		6.9		952	c	610	c	3.4		37	
MR01	W0437	93-0877	08/15/07	9:37	F	0.1		17.8		6.8		937	c	600	c	3.9		42	
MR01	W0437	93-0964	09/17/07	9:49	F	0.1		11.2		6.9		993	c	635	c	6.0		55	
MR01	W0437	93-0985	09/19/07	10:21	F	0.1		11.9		7.0		997	c	638	c	6.0		56	
NR01	W0453	93-0637	05/01/07	9:57	F	0.2		11.3		7.4		625		406		12.0		109	
NR01	W0453	93-0674	06/01/07	15:37	F	0.2		20.8		7.3		710		454		7.9		89	
NR01	W0453	93-0695	06/06/07	12:59	F	0.2		18.0		7.3		638		408		8.3		90	
NR01	W0453	93-0778	07/06/07	14:15	F	0.1		22.4		7.4		713		456		7.3		86	
NR01	W0453	93-0799	07/11/07	13:13	F	0.1		22.8		7.5		838	i, c	536	i, c	##	i	##	i
NR01	W0453	93-0864	08/10/07	13:28	F	0.1		20.0		7.4		775	c	496	c	7.7		86	
NR01	W0453	93-0885	08/15/07	13:24	F	0.1		21.5		7.4		855	c	547	c	8.2		94	
NR01	W0453	93-0972	09/17/07	13:03	F	0.2		16.3		7.5		757	c	485	c	9.6		98	
NR01	W0453	93-0993	09/19/07	13:48	F	0.0	i	17.1		7.5		804	c	515	c	10.0		104	
SB01	W0877	93-0631	05/01/07	11:07	F	0.2		11.3		7.5		791	c	506	c	11.8		110	
SB01	W0877	93-0669	06/01/07	12:46	F	0.2		16.5		7.0		844		540		7.1		74	
SB01	W0877	93-0690	06/06/07	10:59	**	0.2		14.7		7.2		680		435		8.9		90	
SB01	W0877	93-0738	06/29/07	10:21	F	--		17.9	s	--		--		--		--		--	
SB01	W0877	93-0773	07/06/07	11:29	F	0.2		19.8		7.3		690		442		7.7		87	
SB01	W0877	93-0794	07/11/07	10:41	F	0.2		18.2		7.5		969	i, c	620	i, c	##	i	##	i
SB01	W0877	93-0859	08/10/07	11:05	F	0.2		17.3		7.5		966	c	618	c	8.5		90	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
SB01	W0877	93-0880	08/15/07	10:50	F	0.1		18.0		7.5		936	c	599	c	8.7		93	
SB01	W0877	93-0967	09/17/07	10:55	F	0.2		13.1		7.6		930	c	595	c	10.2		98	
SB01	W0877	93-0988	09/19/07	11:25	F	0.2		13.1		7.6		965	c	617	c	10.4		100	
SB01	W0877	93-0744	10/05/07	9:43	F	--		16.2	s	--		--		--		--		--	
SM03	W0889	93-0645	05/01/07	10:19	F	0.3		9.6		6.2		320		208		11.1		98	
SM03	W0889	93-0682	06/01/07	12:35	F	0.1		17.4		6.3		352		226		8.3		88	
SM03	W0889	93-0703	06/06/07	11:48	F	0.4		16.0		5.7		180		115		7.8	i	80	i
SM03	W0889	93-0741	06/29/07	12:31	F	--		19.7	s	--		--		--		--		--	
SM03	W0889	93-0786	07/06/07	11:54	F	0.3		20.8		6.4		344		220		8.0		91	
SM03	W0889	93-0807	07/11/07	12:18	F	0.2		19.6		6.6		365		234		7.9		88	
SM03	W0889	93-0872	08/10/07	12:31	F	0.2		17.6		6.6		398		255		6.9		74	
SM03	W0889	93-0893	08/15/07	11:27	F	0.1		17.3	u	6.5		363		233		6.6		70	
SM03	W0889	93-0980	09/17/07	11:41	F	0.1		14.2		6.4		440		281		7.8		76	
SM03	W0889	93-1001	09/19/07	11:24	F	0.1		12.9		6.4		547		350		8.3		80	
SM03	W0889	93-0747	10/05/07	13:43	F	--		15.7	s	--		--		--		--		--	
SR01B	W0883	93-0630	05/01/07	10:40	F	0.7		11.0		7.3		542		347		10.3		95	
SR01B	W0883	93-0668	06/01/07	12:15	F	0.5		18.6		7.2		608		389		7.5		82	
SR01B	W0883	93-0689	06/06/07	10:38	F	0.4		17.5		7.1		448		287		7.5		80	
SR01B	W0883	93-0772	07/06/07	10:54	F	0.3		20.6		7.1		469		300		6.9		78	
SR01B	W0883	93-0793	07/11/07	10:18	F	0.3		20.3		7.4		642	i	411	i	##	i	##	i
SR01B	W0883	93-0858	08/10/07	10:37	F	0.5		19.8		7.3		492		315		7.5		84	
SR01B	W0883	93-0879	08/15/07	10:20	F	0.4		19.7		7.3		487		312		7.8		86	
SR01B	W0883	93-0966	09/17/07	10:32	F	0.3		13.9		7.4		588		376		9.4		92	
SR01B	W0883	93-0986	09/19/07	11:00	F	0.2		12.9		7.5		743	c	475	c	9.9		94	
SR04A	W0882	93-0627	05/01/07	9:05	F	0.4		10.0		6.4		699		447		8.6		77	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
SR04A	W0882	93-0664	06/01/07	10:01	F	0.7		16.9		6.5		752		481		5.6		58	
SR04A	W0882	93-0685	06/06/07	9:00	F	0.4		16.2		6.3		543		347		5.6		58	
SR04A	W0882	93-0768	07/06/07	9:03	F	0.7		20.2		6.6		550		352		4.2		48	
SR04A	W0882	93-0789	07/11/07	8:49	F	0.1		19.7		6.7		738	i, c	472	i, c	##	i	##	i
SR04A	W0882	93-0854	08/10/07	9:02	F	0.6		19.2		6.5		422		270		3.7	u	40	u
SR04A	W0882	93-0875	08/15/07	8:41	F	0.3		18.7		6.5		417		267		3.8		42	
SR04A	W0882	93-0962	09/17/07	9:01	F	0.2		13.2		6.5		638		409		4.9		47	
SR04A	W0882	93-0983	09/19/07	9:37	F	0.8		12.0	u	6.5		832	c	532	c	4.5		42	
SR05	W1545	93-0629	05/01/07	10:09	F	0.6		10.9		7.1		544		348		9.8		90	
SR05	W1545	93-0667	06/01/07	11:32	F	0.3		19.3		7.1		613		392		6.6		72	
SR05	W1545	93-0688	06/06/07	10:16	F	0.5		17.9		7.0		453		290		6.6		71	
SR05	W1545	93-0771	07/06/07	10:19	F	0.1		20.6		7.0		482		308		5.7		65	
SR05	W1545	93-0792	07/11/07	9:57	F	0.2		20.7		7.3		763	i, c	488	i, c	##	i	##	i
SR05	W1545	93-0857	08/10/07	10:11	F	0.1		19.2		7.3		614		393		7.2		80	
SR05	W1545	93-0878	08/15/07	9:59	F	0.1		18.8		7.3		655		419		7.6		83	
SR05	W1545	93-0965	09/17/07	10:08	F	0.2		12.1		7.4		732	c	469	c	9.4		88	
SR05	W1545	93-0987	09/19/07	10:36	F	0.0	i	11.5		7.6		954	c	610	c	10.1		93	
SX01	W1544	93-0647	05/01/07	11:53	F	0.4		11.3		6.9		697		453		10.8		99	
SX01	W1544	93-0684	06/01/07	14:15	F	0.2		18.7		7.1		749		479		8.3		91	
SX01	W1544	93-0705	06/06/07	13:43	F	0.4		16.1		6.6		323		206		7.5	i	78	i
SX01	W1544	93-0788	07/06/07	13:54	F	0.3		22.7		6.9		583		373		6.9		82	
SX01	W1544	93-0809	07/11/07	14:30	F	0.2		21.2		7.2		755	c	483	c	8.3		96	
SX01	W1544	93-0874	08/10/07	14:01	F	0.7		18.7		7.0		882	c	565	c	5.5		60	
SX01	W1544	93-0895	08/15/07	14:00	F	0.7		18.5	u	6.7		956	c	612	c	4.0		43	
SX01	W1544	93-0982	09/17/07	13:31	S	0.2		12.9		7.0		982	c	629	c	8.1		78	

Table 7. 2007 MassDEP DWM North Shore Coastal Watersheds attended multi-probe data.

Station ID	Unique ID	OWMID	Date	Time	Flow Condition (F=Flowing, NW=No Water, S=Stagnant)	Sample Depth (m)	Depth Qualifiers	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (µS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Dissolved Oxygen Saturation (%)	Dissolved Oxygen Saturation Qualifiers
SX01	W1544	93-1003	09/19/07	12:53	S	0.3		11.9	u	6.9		1030	c	659	c	7.1	u	66	u

Table 8. 2007 MassDEP DWM North Shore Coastal Watersheds unattended probes dissolved oxygen data.

Station ID	Unique ID	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen (mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L (Hours)	Amount of Time < 6.0 mg/L (Hours)	Percentage of Time < 6.0 mg/L (%)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
AL02	W1546	93-0662	06/01/07	91.5	5.9	5.0	1.0	1.1	62.2	67.9	64	50	90
AL02	W1546	93-0766	07/06/07	119.5	7.1	6.3	0.0	0.0	0.0	0.0	79	70	94
AL02	W1546	93-0852	08/10/07	118.5	6.3	4.7	6.0	5.0	46.2	38.9	69	52	88
AL02	W1546	93-0960	09/17/07	47.0	6.5	5.7	0.0	0.0	9.1	19.4	61	52	76
BB01	W1541	93-0656	06/01/07	119.3	7.1	5.7	0.0	0.0	4.4	3.7	75	63	101
BB01	W1541	93-0761	07/06/07	120.5	5.6	3.9	40.7	33.8	72.7	60.3	61	42	94
BB01	W1541	93-0847	08/10/07	119.0	5.1	3.3	68.3	57.4	87.5	73.6	56	36	88
BB01	W1541	93-0956	09/17/07	48.0	5.5	4.7	5.6	11.6	39.4	82.1	52	45	64
BB01A	W0448	93-0649	06/01/07	118.8	5.7	3.3	36.7	30.9	61.0	51.3	58	36	84
BB01A	W0448	93-0750	07/06/07	119.5	2.4	1.5	119.1	99.7	119.5	100.0	26	17	67
BB01A	W0448	93-0836	08/10/07	119.5	4.0	1.9	92.2	77.1	115.8	96.9	41	20	87
BB01A	W0448	93-0947	09/17/07	48.0	6.2	4.9	0.8	1.6	18.2	38.0	55	46	65
BP01	W0878	93-0754	07/06/07	119.0	7.9	6.2	0.0	0.0	0.0	0.0	86	66	110
BP01	W0878	93-0840	08/10/07	119.5	8.1	4.9	1.4	1.2	6.9	5.7	88	54	114
BP01	W0878	93-0950	09/17/07	48.0	9.6	8.5	0.0	0.0	0.0	0.0	92	82	104
CB01	W0888	93-0660	--	--	--	--	--	--	--	--	--	--	--
CC01	W1542	93-0659	06/01/07	119.0	8.0	6.8	0.0	0.0	0.0	0.0	79	70	89
CC01	W1542	93-0764	07/06/07	120.0	7.7	6.4	0.0	0.0	0.0	0.0	81	66	90
CC01	W1542	93-0850	08/10/07	118.0	7.8	6.2	0.0	0.0	0.0	0.0	81	67	90
CC01	W1542	93-0958	09/17/07	47.0	9.4	8.8	0.0	0.0	0.0	0.0	87	84	93
CR01	W0452	93-0759	07/06/07	120.0	6.4	5.9	0.0	0.0	9.1	7.6	75	69	81
CR01	W0452	93-0845	08/10/07	119.5	6.4	5.7	0.0	0.0	18.6	15.6	72	67	86
CR01	W0452	93-0954	09/17/07	48.0	8.2	7.8	0.0	0.0	0.0	0.0	80	78	84
CR02	W0451	93-0760	07/06/07	120.0	5.4	4.7	10.4	8.6	115.6	96.3	60	52	77
CR02	W0451	93-0846	08/10/07	119.0	6.0	5.2	0.0	0.0	48.2	40.5	65	59	88
CR02	W0451	93-0955	09/17/07	47.5	7.8	7.3	0.0	0.0	0.0	0.0	73	69	78
CT01	W1543	93-0658	06/01/07	0.0	--	--	--	--	--	--	--	--	--
CT01	W1543	93-0763	07/06/07	120.0	5.5	4.5	14.3	11.9	107.5	89.6	57	45	81
CT01	W1543	93-0849	--	--	--	--	--	--	--	--	--	--	--
FF02	W1540	93-0657	06/01/07	108.8	8.2	5.8	0.0	0.0	3.6	3.3	82	62	92
FF02	W1540	93-0762	07/06/07	120.0	7.7	7.2	0.0	0.0	0.0	0.0	84	78	89
FF02	W1540	93-0848	08/10/07	119.0	7.9	6.8	0.0	0.0	0.0	0.0	85	78	91
FF02	W1540	93-0957	09/17/07	0.0	--	--	--	--	--	--	--	--	--
GB01	W0454	93-0654	06/01/07	117.3	7.6	6.5	0.0	0.0	0.0	0.0	85	67	117
GB01	W0454	93-0757	07/06/07	118.5	6.9	6.4	0.0	0.0	0.0	0.0	82	75	92
GB01	W0454	93-0843	08/10/07	119.0	6.5	4.9	2.8	2.3	27.7	23.2	73	54	91
GB01	W0454	93-0952	09/17/07	48.0	3.2	2.7	48.0	100.0	48.0	100.0	31	26	44
HB01	W0435	93-0652	06/01/07	117.3	5.6	3.5	21.5	18.4	91.1	77.7	55	37	75
HB01	W0435	93-0755	07/06/07	0.0	--	--	--	--	--	--	--	--	--
HB01	W0435	93-0841	08/10/07	119.0	5.8	4.0	27.0	22.7	72.1	60.5	60	44	75
HB02	W0436	93-0653	06/01/07	105.3	7.9	7.2	0.0	0.0	0.0	0.0	80	73	88
HB02	W0436	93-0756	07/06/07	118.5	7.3	5.9	0.0	0.0	0.5	0.4	79	67	88
HB02	W0436	93-0842	08/10/07	119.0	7.4	6.2	0.0	0.0	0.0	0.0	79	70	85
HB02	W0436	93-0951	09/17/07	48.5	8.9	8.6	0.0	0.0	0.0	0.0	83	81	88

Table 8. 2007 MassDEP DWM North Shore Coastal Watersheds unattended probes dissolved oxygen data.

Station ID	Unique ID	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen (mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L (Hours)	Amount of Time < 6.0 mg/L (Hours)	Percentage of Time < 6.0 mg/L (%)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
MR01	W0437	93-0650	06/01/07	84.5	5.6	4.4	22.1	26.1	62.8	74.3	60	45	82
MR01	W0437	93-0751	07/06/07	119.5	4.7	2.7	70.2	58.7	91.1	76.2	55	30	93
MR01	W0437	93-0837	08/10/07	119.5	5.0	2.8	67.9	56.8	83.8	70.1	56	31	100
NR01	W0453	93-0655	06/01/07	117.0	7.6	6.4	0.0	0.0	0.0	0.0	83	70	95
NR01	W0453	93-0758	07/06/07	0.0	--	--	--	--	--	--	--	--	--
NR01	W0453	93-0844	08/10/07	119.5	7.2	5.3	0.0	0.0	6.5	5.4	81	61	103
NR01	W0453	93-0953	09/17/07	48.0	8.9	8.2	0.0	0.0	0.0	0.0	88	80	104
SB01	W0877	93-0753	07/06/07	119.0	7.1	5.2	0.0	0.0	5.6	4.7	78	59	93
SB01	W0877	93-0839	08/10/07	66.0	7.2	5.1	0.0	0.0	14.0	21.2	77	57	94
SB01	W0877	93-0949	09/17/07	48.0	9.6	9.0	0.0	0.0	0.0	0.0	91	85	99
SM03	W0889	93-0661	06/01/07	119.0	8.0	7.0	0.0	0.0	0.0	0.0	83	74	94
SM03	W0889	93-0765	07/06/07	120.0	7.6	7.1	0.0	0.0	0.0	0.0	85	80	95
SM03	W0889	93-0851	08/10/07	118.0	6.7	5.0	0.0	0.0	35.6	30.1	72	54	94
SM03	W0889	93-0959	09/17/07	47.0	8.0	7.5	0.0	0.0	0.0	0.0	77	70	88
SR01B	W0883	93-0651	06/01/07	81.0	7.5	7.0	0.0	0.0	0.0	0.0	80	71	87
SR01B	W0883	93-0752	07/06/07	119.0	6.2	5.0	0.7	0.6	52.8	44.4	71	56	85
SR01B	W0883	93-0838	08/10/07	119.0	7.5	6.4	0.0	0.0	0.0	0.0	84	72	89
SR01B	W0883	93-0948	09/17/07	47.5	9.4	9.1	0.0	0.0	0.0	0.0	90	88	94
SR04A	W0882	93-0648	06/01/07	118.5	4.9	4.1	70.7	59.7	112.4	94.9	52	43	70
SR04A	W0882	93-0749	07/06/07	119.0	4.5	3.5	93.3	78.4	119.0	100.0	51	39	69
SR04A	W0882	93-0835	08/10/07	119.0	3.1	0.8	118.8	99.8	119.0	100.0	34	9	66
SR04A	W0882	93-0946	09/17/07	48.0	4.0	3.5	48.0	100.0	48.0	100.0	37	33	44
SX01	W1544	93-0663	06/01/07	119.0	7.3	5.8	0.0	0.0	6.3	5.3	75	62	93
SX01	W1544	93-0767	07/06/07	120.5	6.6	5.6	0.0	0.0	21.2	17.6	74	64	94
SX01	W1544	93-0853	08/10/07	119.5	4.9	0.5	60.7	50.8	100.9	84.5	54	6	89
SX01	W1544	93-0961	09/17/07	44.5	7.4	5.6	0.0	0.0	1.9	4.2	69	52	92

Table 9. 2007 MassDEP DWM North Shore Coastal Watersheds unattended probes temperature data.

Unique ID	Station ID	OWMID	Start Date	Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Amount of Time > 28.3 deg. C (Hours)	Percentage of Time > 28.3 deg. C (%)
AL02	W1546	93-0662	06/01/07	91.5	18.4	23.6	19.9	27.3	29.8	0.0	0.0
AL02	W1546	93-0766	07/06/07	119.5	19.1	21.9	20.6	26.0	21.8	0.0	0.0
AL02	W1546	93-0852	08/10/07	118.5	18.5	23.1	22.0	24.7	20.8	0.0	0.0
AL02	W1546	93-0960	09/17/07	47.0	12.5	15.2	15.0	0.0	0.0	0.0	0.0
BB01	W1541	93-0656	06/01/07	119.3	17.1	22.2	19.1	17.5	14.7	0.0	0.0
BB01	W1541	93-0761	07/06/07	120.5	18.0	23.6	20.6	11.8	9.8	0.0	0.0
BB01	W1541	93-0847	08/10/07	119.0	18.9	25.9	23.8	35.7	30.0	0.0	0.0

Table 9. 2007 MassDEP DWM North Shore Coastal Watersheds unattended probes temperature data.

Unique ID	Station ID	OWMID	Start Date	Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Amount of Time > 28.3 deg. C (Hours)	Percentage of Time > 28.3 deg. C (%)
BB01	W1541	93-0956	09/17/07	48.0	12.8	14.5	14.3	0.0	0.0	0.0	0.0
BB01A	W0448	93-0649	06/01/07	118.8	15.6	20.2	17.8	2.9	2.5	0.0	0.0
BB01A	W0448	93-0731	06/29/07	2356.5	16.3	25.4	18.0	238.1	10.1	0.0	0.0
BB01A	W0448	93-0750	07/06/07	119.5	19.1	23.2	22.1	41.0	34.3	0.0	0.0
BB01A	W0448	93-0836	08/10/07	119.5	16.4	23.0	18.6	6.3	5.3	0.0	0.0
BB01A	W0448	93-0947	09/17/07	48.0	10.2	13.6	13.4	0.0	0.0	0.0	0.0
BP01	W0878	93-0733	06/29/07	2352.5	18.5	26.1	21.3	676.7	28.8	0.0	0.0
BP01	W0878	93-0754	07/06/07	119.0	18.5	21.8	21.3	28.1	23.6	0.0	0.0
BP01	W0878	93-0840	08/10/07	119.5	18.3	23.1	22.0	30.5	25.5	0.0	0.0
BP01	W0878	93-0950	09/17/07	48.0	13.5	17.1	17.1	0.0	0.0	0.0	0.0
CB01	W0888	93-0660	--	--	--	--	--	--	--	--	--
CC01	W1542	93-0659	06/01/07	119.0	14.5	17.6	16.1	0.0	0.0	0.0	0.0
CC01	W1542	93-0764	07/06/07	120.0	16.7	19.9	18.7	0.0	0.0	0.0	0.0
CC01	W1542	93-0850	08/10/07	118.5	16.4	21.8	20.1	5.7	4.8	0.0	0.0
CC01	W1542	93-0958	09/17/07	47.0	12.1	15.4	15.4	0.0	0.0	0.0	0.0
CR01	W0452	93-0759	07/06/07	120.0	21.6	23.7	23.1	114.6	95.5	0.0	0.0
CR01	W0452	93-0845	08/10/07	119.5	20.7	23.5	22.9	74.1	62.0	0.0	0.0
CR01	W0452	93-0954	09/17/07	48.0	14.3	16.6	16.6	0.0	0.0	0.0	0.0
CR02	W0451	93-0760	07/06/07	120.0	19.3	22.5	20.9	28.9	24.1	0.0	0.0
CR02	W0451	93-0846	08/10/07	119.0	18.3	24.7	20.9	12.6	10.6	0.0	0.0
CR02	W0451	93-0955	09/17/07	47.5	12.8	13.3	13.2	0.0	0.0	0.0	0.0
CT01	W1543	93-0658	06/01/07	119.0	16.2	20.2	18.4	4.4	3.7	0.0	0.0
CT01	W1543	93-0763	07/06/07	120.0	16.4	20.4	17.5	1.3	1.1	0.0	0.0
CT01	W1543	93-0849	--	--	--	--	--	--	--	--	--
FF02	W1540	93-0657	06/01/07	119.3	15.3	18.5	16.8	0.0	0.0	0.0	0.0
FF02	W1540	93-0762	07/06/07	120.0	18.4	21.1	19.0	10.5	8.7	0.0	0.0
FF02	W1540	93-0848	08/10/07	119.0	18.1	22.6	20.2	10.9	9.2	0.0	0.0
FF02	W1540	93-0957	09/17/07	47.5	12.2	13.2	13.1	0.0	0.0	0.0	0.0
GB01	W0454	93-0654	06/01/07	117.3	19.8	25.1	21.9	60.3	51.4	0.0	0.0
GB01	W0454	93-0736	06/29/07	2147.5	18.7	27.8	20.3	638.3	29.7	0.0	0.0
GB01	W0454	93-0757	07/06/07	118.5	22.6	25.0	23.9	118.5	100.0	0.0	0.0
GB01	W0454	93-0843	08/10/07	119.0	19.9	23.8	22.9	52.7	44.3	0.0	0.0
GB01	W0454	93-0952	09/17/07	48.0	12.7	14.1	14.1	0.0	0.0	0.0	0.0
HB01	W0435	93-0652	06/01/07	117.3	14.3	17.5	16.3	0.0	0.0	0.0	0.0
HB01	W0435	93-0755	07/06/07	107.0	16.9	18.0	17.3	0.0	0.0	0.0	0.0
HB01	W0435	93-0841	08/10/07	119.0	17.0	21.4	19.2	5.0	4.2	0.0	0.0
HB02	W0436	93-0653	06/01/07	117.5	15.4	18.2	16.9	0.0	0.0	0.0	0.0
HB02	W0436	93-0756	07/06/07	118.5	18.8	20.8	20.1	18.7	15.8	0.0	0.0
HB02	W0436	93-0842	08/10/07	119.0	17.9	21.9	20.1	9.2	7.7	0.0	0.0
HB02	W0436	93-0951	09/17/07	48.5	12.2	14.0	13.9	0.0	0.0	0.0	0.0
HB02	W0436	93-0734	--	--	--	--	--	--	--	--	--
MR01	W0437	93-0650	06/01/07	118.5	17.7	22.3	19.3	18.5	15.6	0.0	0.0
MR01	W0437	93-0751	07/06/07	119.5	20.9	25.0	24.0	71.6	59.9	0.0	0.0

Table 9. 2007 MassDEP DWM North Shore Coastal Watersheds unattended probes temperature data.

Unique ID	Station ID	OWMID	Start Date	Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Amount of Time > 28.3 deg. C (Hours)	Percentage of Time > 28.3 deg. C (%)
MR01	W0437	93-0837	08/10/07	119.5	20.1	26.1	24.7	58.2	48.7	0.0	0.0
NR01	W0453	93-0655	06/01/07	117.0	18.5	22.4	20.3	36.9	31.5	0.0	0.0
NR01	W0453	93-0758	07/06/07	0.0	--	--	--	--	--	--	--
NR01	W0453	93-0844	08/10/07	119.5	20.4	24.1	22.3	69.1	57.8	0.0	0.0
NR01	W0453	93-0953	09/17/07	48.0	14.8	16.9	16.9	0.0	0.0	0.0	0.0
SB01	W0877	93-0732	06/29/07	2351.0	18.3	27.9	19.9	586.2	24.9	0.0	0.0
SB01	W0877	93-0753	07/06/07	119.0	18.5	21.0	20.1	10.5	8.8	0.0	0.0
SB01	W0877	93-0839	08/10/07	66.0	17.9	20.7	20.0	7.8	11.8	0.0	0.0
SB01	W0877	93-0949	09/17/07	48.0	12.8	14.5	14.5	0.0	0.0	0.0	0.0
SM03	W0889	93-0661	06/01/07	119.0	16.6	20.7	18.3	3.8	3.2	0.0	0.0
SM03	W0889	93-0735	06/29/07	2352.5	18.2	25.2	20.0	534.7	22.7	0.0	0.0
SM03	W0889	93-0765	07/06/07	120.0	19.6	22.8	21.5	43.4	36.1	0.0	0.0
SM03	W0889	93-0851	08/10/07	118.0	18.0	21.8	20.5	16.0	13.5	0.0	0.0
SM03	W0889	93-0959	09/17/07	47.0	13.4	15.8	15.8	0.0	0.0	0.0	0.0
SR01B	W0883	93-0651	06/01/07	81.0	18.4	21.5	21.0	24.4	30.1	0.0	0.0
SR01B	W0883	93-0752	07/06/07	119.0	20.7	22.0	21.5	95.6	80.3	0.0	0.0
SR01B	W0883	93-0838	08/10/07	119.0	19.8	22.4	21.1	53.3	44.8	0.0	0.0
SR01B	W0883	93-0948	09/17/07	47.5	13.2	14.4	14.1	0.0	0.0	0.0	0.0
SR04A	W0882	93-0648	06/01/07	118.5	17.8	22.3	19.7	29.7	25.0	0.0	0.0
SR04A	W0882	93-0749	07/06/07	119.0	20.3	22.5	21.5	69.1	58.1	0.0	0.0
SR04A	W0882	93-0835	08/10/07	119.0	18.4	22.8	20.1	23.4	19.7	0.0	0.0
SR04A	W0882	93-0946	09/17/07	48.0	11.8	12.5	12.2	0.0	0.0	0.0	0.0
SX01	W1544	93-0663	06/01/07	119.0	16.3	21.9	18.7	6.0	5.0	0.0	0.0
SX01	W1544	93-0767	07/06/07	120.5	19.5	23.2	20.3	40.2	33.4	0.0	0.0
SX01	W1544	93-0853	08/10/07	119.5	18.7	21.2	20.2	28.1	23.5	0.0	0.0
SX01	W1544	93-0961	09/17/07	46.5	12.0	13.4	12.9	0.0	0.0	0.0	0.0

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APPENDIX 1: 2007 DATA SYMBOLS AND QUALIFIERS

Excerpted from: Water Quality Data Validation Report for Year 2007 Project Data (CN 320.0)

The following data qualifiers or symbols are used in the MADEP/DWM WQD database for qualified and censored water quality and multi-probe data. Decisions regarding censoring vs. qualification for specific, problematic data are made based on a thorough review of all pertinent information related to the data. Data qualifiers reported by laboratories are typically either directly-transferable to DWM data (e.g., "H" for holding time violation) or indirectly-transferable, where the qualifier symbol is transformed to conform to DWM's qualifier list (e.g., "R" qualifier used by a lab to reject data due to poor QC results is transformed to "a").

General Symbols (applicable to all types):

" ## " = Censored data (i.e., data that has been discarded for some reason).

" ** " = Missing data (i.e., data that should have been reported).

" -- " = No data (i.e., data not taken/not required)

" ^^ " = No data due to no water

Multi-probe-specific Qualifiers:

" i " = inaccurate readings from Multi-probe likely; may be due to significant pre-survey calibration problems, post-survey checks outside typical acceptance ranges for the low ionic and deionized water checks, lack of calibration of the depth sensor prior to use, or to checks against laboratory analyses. Where documentation on unit pre-calibration is lacking, but SOPs at the time of sampling dictated pre-calibration prior to use, then data are considered potentially inaccurate.

" m " = method not followed; one or more protocols contained in the DWM Multi-probe SOP not followed, i.e., operator error (e.g., less than 3 readings per station (rivers) or per depth (lakes), or instrument failure not allowing method to be implemented.

" s " = field sheet recorded data were used to accept data, not data electronically recorded in the Multi-probe surveyor unit, due to operator error or equipment failure.

" u " = unstable readings, due to lack of sufficient equilibration time prior to final readings, non-representative location, highly-variable water quality conditions, etc. See Section 4.1 for acceptance criteria.

" c " = greater than calibration standard used for pre-calibration, or outside the acceptable range about the calibration standard. Typically used for conductivity (>718, 1,413, 2,760, 6,668 or 12,900 uS/cm) or turbidity (>10, 20 or 40 NTU). It can also be used for TDS and Salinity calculations based on qualified ("c") conductivity data, or that the calculation was not possible due to censored conductivity data (TDS and Salinity are calculated values and entirely based on conductivity reading). See Section 4.1 for acceptance criteria.

" r " = data not representative of actual field conditions.

" t " = tidal conditions

Sample-Specific Qualifiers:

“ a ” = accuracy as estimated at WES Lab via matrix spikes, PT sample recoveries, internal check standards and lab-fortified blanks did not meet project data quality objectives identified for program or in QAPP.

“ b ” = blank Contamination in lab reagent blanks and/or field blank samples (indicating possible bias high and false positives).

“ d ” = precision of field duplicates (as RPD) did not meet project data quality objectives identified for program or in QAPP. Batched samples may also be affected.

“ e ” = not theoretically possible. Specifically, used for bacteria data where colonies per unit volume for e-coli bacteria > fecal coliform bacteria, for lake Secchi and station depth data where a specific Secchi depth is greater than the reported station depth, and for other incongruous or conflicting results.

“ f ” = frequency of quality control duplicates did not meet data quality objectives identified for program or in QAPP.

“ h ” = holding time violation (usually indicating possible bias low)

“ j ” = ‘estimated’ value; used for lab-related issues where certain lab QC criteria are not met and re-testing is not possible (as identified by the WES lab only). Also used to report sample data where the sample concentration is less than the ‘reporting’ limit or RDL and greater than the method detection limit or MDL (mdl< x <rdl). Also used to note where values have been reported at levels less than the mdl.

“ m ” = method SOP not followed, only partially implemented or not implemented at all, due to complications with sample matrix (e.g., sediment in sample, floc formation), lab error (e.g., cross-contamination between samples), additional steps taken by the lab to deal with matrix complications, lost/unanalyzed samples, and missing data.

“ p ” = samples not preserved per SOP or analytical method requirements.

“ r ” = samples collected may not be representative of actual field conditions, including the possibility of “outlier” data and flow-limited conditions (e.g., pooled).

“ t ” = tidal conditions